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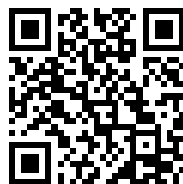
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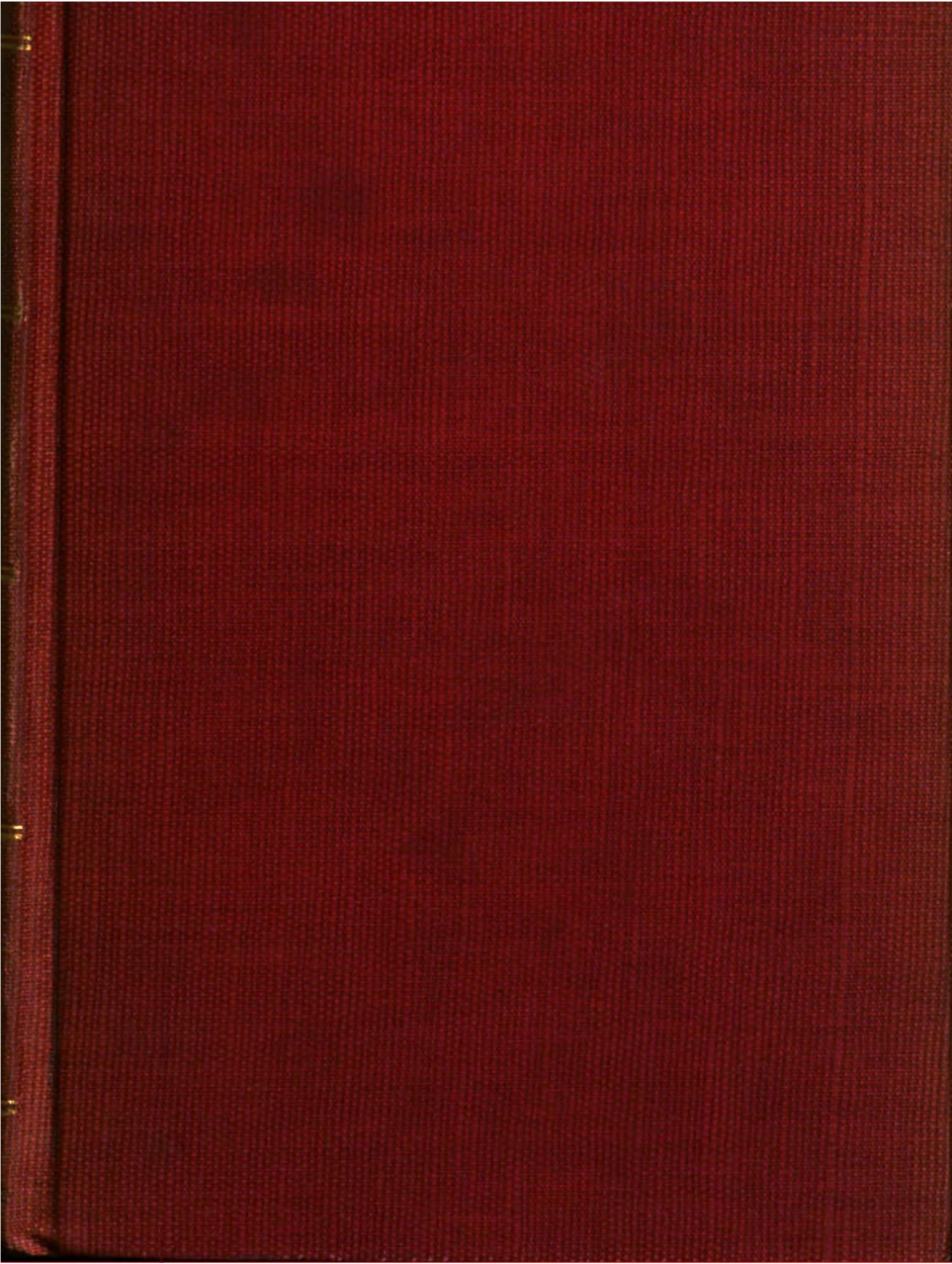
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"In adopting our title of the *Journal of Mental Science*, published by authority of the *Medico-Psychological Association*, we profess that we cultivate in our pages mental science of a particular kind, namely, such mental science as appertains to medical men who are engaged in the treatment of the insane. But it has been objected that the term mental science is inapplicable, and that the term mental physiology or mental pathology, or psychology, or psychiatry (a term much affected by our German brethren), would have been more correct and appropriate; and that, moreover, we do not deal in mental science, which is properly the sphere of the aspiring metaphysical intellect. If mental science is strictly synonymous with metaphysics, these objections are certainly valid; for although we do not eschew metaphysical discussion, the aim of this JOURNAL is certainly bent upon more attainable objects than the pursuit of those recondite inquiries which have occupied the most ambitious intellects from the time of Plato to the present, with so much labour and so little result. But while we admit that metaphysics may be called one department of mental science, we maintain that mental physiology and mental pathology are also mental science under a different aspect. While metaphysics may be called speculative mental science, mental physiology and pathology, with their vast range of inquiry into insanity, education, crime, and all things which tend to preserve mental health, or to produce mental disease, are not less questions of mental science in its practical, that is in its sociological point of view. If it were not unjust to high mathematics to compare it in any way with abstruse metaphysics, it would illustrate our meaning to say that our practical mental science would fairly bear the same relation to the mental science of the metaphysicians as applied mathematics bears to the pure science. In both instances the aim of the pure science is the attainment of abstract truth; its utility, however, frequently going no further than to serve as a gymnasium for the intellect. In both instances the mixed science aims at, and, to a certain extent, attains immediate practical results of the greatest utility to the welfare of mankind; we therefore maintain that our JOURNAL is not inaptly called the *Journal of Mental Science*, although the science may only attempt to deal with sociological and medical inquiries, relating either to the preservation of the health of the mind or to the amelioration or cure of its diseases; and although not soaring to the height of abstruse metaphysics, we only aim at such metaphysical knowledge as may be available to our purposes, as the mechanician uses the formularies of mathematics. This is our view of the kind of mental science which physicians engaged in the grave responsibility of caring for the mental health of their fellow-men may, in all modesty, pretend to cultivate; and while we cannot doubt that all additions to our certain knowledge in the speculative department of the science will be great gain, the necessities of duty and of danger must ever compel us to pursue that knowledge which is to be obtained in the practical departments of science with the earnestness of real workmen. The captain of a ship would be none the worse for being well acquainted with the higher branches of astronomical science, but it is the practical part of that science as it is applicable to navigation which he is compelled to study."—Sir J. C. Bucknill, M.D., F.R.S.

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Part I.—Original Articles.

*Some New Features in the Intimate Structure of the
Human Cerebral Cortex.* By JOHN TURNER, M.B.,
County Asylum, Brentwood, Essex.

THE new features are—(1) a beaded network which envelops the pyramidal cells of the cortex cerebri, and which has not hitherto been observed in human brains, but only around the nerve-cells of some of the lower animals (guinea-pigs and rabbits) when subjected to the influence of methylene blue injected into the tissues during life; and (2) an inter-cellular plexus of extremely fine fibrils which has, I believe, never before been actually demonstrated in any brains, human or otherwise.

The method by which I am able to show these structures was originally described in part xci, autumn, 1900, of *Brain* (pp. 524—529). This was only a short preliminary notice, and was followed by a fuller account in the summer number, 1901, of the same journal. But, previous to the appearance of this paper, I gave a microscopical demonstration at a meeting of the Neurological Society in May, 1901.

The method consists in staining pieces of cortex as they are

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taken from the cadaver in a mixture of methylene blue (1 *per cent.*) and peroxide of hydrogen (10 *per cent.*)—four parts of the former to one part of the latter. They are kept in this mixture from seven to ten days, and then fixed in 10 *per cent.* of molybdate of ammonium, thoroughly washed, dehydrated, soaked in xylol, embedded in paraffin, and cut.

In the second of the papers to *Brain* I laid great stress upon the influence of light on the success of the stain, chiefly because all, or nearly all, my successes occurred during the summer-time. I now believe, however, that this idea is quite erroneous, and that light has no influence at all on the reaction. I have obtained a successful result in tissue kept in a dark cupboard all the time it was in the staining fluid. The successes were probably due to some slight decomposition changes in the tissue, which would be facilitated by warm weather.

It must not be supposed from this term that I use material which presents any gross alteration of a decomposition nature, or which can in any way be characterised as decayed. I am referring to a supposititious delicate chemical change manifested in *some* cases during the process of decomposition, which allows the tissue to react in this characteristic way to the stain, and which sometimes occurs shortly (7 hours) after death, and perhaps sometimes (in septicæmic cases) even before death. The delicacy of this change is shown by the fact that whilst one part of a small piece of material will take on the stain beautifully, contiguous parts often fail to react at all.

In the successful sections we meet with no obvious alterations in the contour of the nerve-cells, and in most cases the fixation is so perfect that absolutely no trace of a pericellular or perivascular space exists.

I have carried out a number of trials with tissues put into the staining fluid at different intervals after death, and these, although not decisive, on the whole bear out this contention; but not all material will give the reaction, however long after death it is kept, before being put into the stain. Some of my best results were obtained with the brains from cases of recent and acute insanity, in which, in all probability, no demonstrable structural alteration of the nervous matter had occurred.

I have made many trials with the brains of dogs, cats, kittens, guinea-pigs, doves, etc., but have so far only succeeded

in getting slight indications of the reaction in a cat's brain, and in a two-months-old pup, kept forty-six hours after death before staining; in the latter the thorny processes of the Purkinje cells showed faintly, but unmistakably.

The great delicacy of the reaction is indicated by the fact already mentioned of the selection of the stain for individual parts of the piece of tissue; and further, while sometimes one part of a cell stains faintly, the remainder colours quite darkly. Apparently with certain chemical changes in the tissue the pyramidal cells, which usually stain very lightly, tend to take on a dark colour, and in these cases their dendrites can be followed for considerable distances, and the picture has a resemblance to a Golgi preparation. To some extent my method is the complement to Golgi's, for whereas this picks out *par excellence* the pyramidal system of cells, mine, as a rule, almost entirely neglects these, and especially selects other cells, which I have termed "dark cells," on account of their affinity for the stain.

In this paper I shall deal almost entirely with the cerebrum; only a passing reference will be made to certain points in the intimate structure of the cerebellum, where these serve to confirm results obtained in the former.

The following are the points I shall treat of in the order named:

1. The pericellular network.
2. The differentiation of cells into pale and dark varieties.
3. The origin of the network from dendrites of the dark cells.
4. The junction also of collaterals with the network.
5. The intercellular plexus.

The Pericellular Network.

This structure has been seen around the nerve-cells of some of the lower animals by means of Ehrlich's "intra-vitam" method of staining, but I was the first to show it in the human brain. Ehrlich's method, however, does not bring out so much detail as mine, and does not, I believe, reveal the network and its appendages in their entirety, so that the accounts drawn from tissues stained by the "intra-vitam" method are wanting, in accuracy at least, when applied to the structure seen about human nerve-cells.

Drs. W. Aldren Turner and W. Hunter (1) give a careful description of it, as observed about the cells of rabbits, guinea-pigs, etc.

From their account, and the stress they lay on *the* fibril passing to join the network, which they term the cellulipetal fibre, it is evident that they look upon the network as a closed sac drawn over the cell body, as it were, and resulting from the ramification of a solitary nerve-fibril; but such a conception, at least in the human brain, is very far from representing the facts of the case.

The network in man consists of fine dark fibrils, on which, at varying distances, are small dark beads, or sometimes rings, which, as a rule, are the nodal points of the meshes. The beads vary considerably in size, the average being about $1\ \mu$. The size of the mesh and the coarseness of its fibrils also differ, so that, while sometimes one meets with a big-meshed, net, having consequently relatively few beads, and with very delicate fibrils, at others the beads are larger, very closely clustered together, or even partially coalescing, and the fibrils much coarser.

It extends not only over the cell body, but over the apex and dendrites, and in one case I have been able to trace it for over two hundred micro-millimetres along the dendrite of a Betz cell. It does not appear to invest the axon at all.

Now in contradistinction to the description of it drawn from the lower animals, it is emphatically not a closed sac having its origin from a single fibril. Multitudes of delicate branches, like free tags, can be seen on all sides passing to the beads of the network, not only over the cell body, but to that part of the structure which envelops the apex and the dendrites. These fine fibrils can often be traced back to thicker ones, which in many cases must come from manifestly different sources. This is an important fact, because it shows that the network is in continuity with more than one cell of origin.

Another point to be noted is that practically the same network often extends over two adjacent cells.

This structure is obviously a pericellular one, and I do not think it will be necessary to enter into a discussion as to its possible neuroglial origin in face of the facts which I shall bring forward, viz., that I can demonstrate its direct origin from the dendrites of the dark cells, and there can be no question that

these are nervous, as their axis-cylinders can be identified ; and secondly, I can also demonstrate that collaterals blend with the network.

It has been previously assumed that it is an offshoot from axis-cylinders of the pyramidal cells ; that, in fact, it represents the arborisation of a collateral from one pyramidal cell breaking up around the body of another. This idea is not altogether correct, for although collaterals do certainly make union with the network, there is no evidence to show that they are directly concerned in the formation of this structure ; while on the other hand I can show, in several instances, its direct origin from the ultimate splitting up of the *dendrites* from the dark cells. Even before the actual demonstration was arrived at, the remarkable similarity between the beaded fibrillæ of the network and those obviously proceeding from the dark cells rendered this assumption almost a certainty. Axis-cylinders and collaterals, as I shall point out later on, in as far as they are represented by my method, do not show beads or varicosities on them.

So far as I am able to determine at present this network is only met with over cells of the pale variety, *i. e.* the pyramidal cells. It can be seen over these in all the layers where they are met with except the second layer, and probably the innermost, or layer of spindle-cells, and I think that in all probability it envelops these also, but unfortunately they lie in parts which do not take on the reaction to the same extent as the middle layers ; at the most one sees here and there a dark cell picked out in the lower part of the second layer.

Taking for granted, then, that the network is a nerve structure, its presence all along the dendrites is evidence that these parts are concerned in the conduction of nervous impulses, and are not merely, as Golgi and others think, roots having only a nutritional value to the cell. On this point I think that the demonstration of the dendritic origin of the network will be sufficient of itself to dispose of this idea.

Thorns.—Before leaving these pale network-enveloped pyramidal cells I wish to make a few observations on the occurrence of the so-called “thorns” or “gemmules” with which their apex and dendrites are studded when prepared by Golgi’s method.

Dr. Alexander Hill (2) believes that these structures are

formed by the overflowing from the cell-plasm of a softer staining substance along the course of fibrils which the method of Golgi does not reveal. And as his remarks on the appearances sometimes shown by the thorns are highly suggestive, from my point of view, of the part which the beaded network plays in their production, I shall quote them :—"Sometimes the thorns appear as rods with knobs at their ends (gemmules). Sometimes one dot or several dots are seen unconnected with the dendrite, but so placed as to indicate that they have been led into position by an invisible fibril. Occasionally the thorn is replaced by a filament of considerable length."

There has always been a strong feeling with some that these little bodies were artificial, and probably produced by deposits of silver along the protoplasmic processes. When, however, Ramon y Cajal (3) announced in 1896 that he had been able to demonstrate them by methylene blue on cerebral cells, the view of their natural origin was strongly reinforced, and they received notice in the text-books.

With all due deference to the opinion of such a distinguished observer, I suspect, in view of the facts which my method shows, that these thorns are, strictly speaking, of artificial production in the case of the pyramidal cells of the cerebrum. I am inclined to believe that they are not intrinsic parts of the cell at all, but belong to the network, and represent deposits of silver about the beads and numerous fibrils, which, as I have stated, pass off from all parts of the network in great numbers.

It may be considered that this is a somewhat presumptuous statement to make, as I have already said that my method practically neglects the staining of the pyramidal cells. This is so as a rule, but with some conditions, the nature of which we do not understand, and which are accompanied by alterations in their chemical structure, these pyramidal cells here and there stain deeply, and so also do the antler cells of the cerebellum. And when this state of affairs is present the latter show most beautifully numbers of little lateral projections along their dendrites, whereas the pyramidal cells never do ; their dendrites certainly do on these occasions show an irregular and somewhat shaggy aspect, but I think that this appearance can be much more satisfactorily explained as due to the beads and fibrils *surrounding* the dendrites than as representing an integral portion of the dendrite itself, and they unquestionably show no

resemblance to the crowds of little projections seen regularly arranged alongside the branches of the antler cells.

I am well aware of the risks one runs in arguing from *negative* appearances, as it were, in cerebral microscopical anatomy, but I think that when a method under certain conditions shows structures plainly in one part of the nervous system, one is at least justified in being sceptical about the existence of these structures in other parts when they do not appear.

Ramon y Cajal does not appear to have demonstrated thorns on the Purkinje cell branches with methylene blue—at least I can find no reference to such an observation,—and they are not alluded to in the last edition of Quain's *Anatomy* as occurring here, just in the place where, as I can show, they almost unquestionably exist as intrinsic parts of the cell structure.

The Dark Cells.

The second feature to be noticed is the differentiation by this method of the cortical cells into two classes, *viz.*, those which stain of a very pale blue colour, often almost colourless, and those which stain very deeply, nearly black.

The pyramidal cells and the giant cells of Betz belong to the first class or pale variety, and the other consists of cells scattered irregularly throughout the cortex. It is quite remarkable the sharp distinction which the same staining fluid draws between these two classes of cells. This marking off of the cells is maintained in the molecular layer of the cerebellum ; in that organ the antler cells are the pale ones, whilst the basket and small cortical cells are the dark.

In both cerebral and cerebellar cortex, however, occasionally the pale variety tends in places to stain deeply, but it is seldom that they approach the dark colour of the other variety. Sometimes this alteration affects only a part of the cell, so that, whilst the apex and dendrites may be dark, the body may be pale, or sometimes one portion of the body will be dark and the remainder light. This alteration, as already mentioned, seems to depend on some delicate chemical change, often, but not of necessity, accompanying pathological conditions.

Besides the difference in staining affinity, there are other points of distinction between the two kinds of cells.

a. The pale or pyramidal cells are definitely orientated. The dark are not ; they lie in any direction, and sometimes, as will be referred to later on, their axis cylinder arises from the surface aspect and sometimes from the lower border. This lack of orientation is particularly well shown among the dark cells of the cerebellum.

b. Size and shape.—Generally speaking, they are smaller than the pale, and many of them are quite minute and easily overlooked under low powers (quarter inch). Some, however, reach a relatively large size, almost as big as a medium-sized pyramidal cell. They are of diverse shapes—round, oval, polygonal, and triangular—and in the frontal cortex I have met with a number which are very long and slender, spindle shape.

c. Position.—They occur with certainty from the lower part of the second layer inclusive down to the commencement of the innermost layer of the cortex. I am not able to speak of the other layers, as the reaction does not take place in these.

d. The largest number of them are seen, roughly speaking, at the junction of the outer and middle third of the cortex. In a comparison between frontal, ascending frontal, and occipital cortex, which are the three regions I have chiefly examined, they seem to be least numerous in ascending frontal. Both frontal and occipital contain many more, but I am not certain in which of these two they are most numerous.

In the frontal besides the spindle variety we meet with large numbers of small, often angular, cells, and in the occipital chiefly with small rounded or pentagonal ones, and here they seem to be most thickly clustered about the layer of small granule cells, either just above it, within it, or just below it.

e. Nucleus.—This stains even darker than the cytoplasm, and appears as a homogeneous body, and not granular like the nucleus of the pale variety.

f. Axis cylinder.—This is easily recognised, and the description given of it applies also to the axis cylinder of the pale cells. It has a perfectly smooth contour, and is generally at its origin disposed in somewhat sharp twists reminding one of a corkscrew. At its commencement it stains deeply, but at a little distance from the cell it gradually loses its colour and appears as a very pale blue or grey fibril. When it can be followed for any distance it shows here and there dark areas

of several μ in length. At these sites it is sometimes slightly swollen, at others shrunken; very often from these parts branches are given off—generally, but not always, at right angles to the parent stem. In some preparations these axis cylinders and collaterals can be seen in large numbers and traced for very long distances (*e. g.*, 600 μ), but they never, so far as I have observed, show any beads along their course.

I take it that the pale fibre is myelinated, and that the dark areas referred to represent the sites of nodes of Ranvier. Although the above description applies to myelinated fibres, yet a study of the axis cylinders of the basket cells of the cerebellum, which are not myelinated, and which stain deeply throughout their course, confirms the observation that axis cylinders and collaterals by my method do not show beads or varicosities.

g. Dendrites.—The main protoplasmic branches have generally a shaggy aspect, and are usually given off from the body of the cell abruptly, not passing off, as it were, by insensible degrees like the apical process of a pyramidal cell. They divide at somewhat infrequent intervals, and the branches can often be followed a very long distance without any sensible diminution in calibre, which is a point in marked contrast to the axis cylinder, which very rapidly dwindles to a small fibril. The finer (ultimate) branches of the dendrites are always beaded. Although I have just stated that the branches divide at infrequent intervals, yet apparently, all along their course, quite fine threads pass off nearly at right angles from the bigger branches along which they are closely set; these, together with the terminal fine-beaded fibrils just alluded to, form a dense inter-cellular plexus which pervades the entire matrix of the grey matter wherever the staining is successful.

The Origin of the Network from Dendrites of the Dark Cells.

I have been able in several instances to trace the actual passage of one of the finer branches of a protoplasmic process of a dark cell into a network, of which it evidently forms an integral part.

In one case a stout dendrite, proceeding from a dark cell, terminated in a triangular-shaped mass, from the base of which two delicate branches proceeded; one of these again widened

out into a triangular shape, and gave off from its base two more threads which terminated in beads, the whole structure manifestly forming part of a network over a pale cell. This is very clearly shown in the figure, page 13. The dark cell, from which the dendrite passing to the network proceeds, is not in the picture. From the base of its terminal triangular mass two delicate fibres proceed. One is out of the plane of the photograph; the other is shown, passing down to end in another triangle, from which two fibres ending in beads pass off. The body of the pale cell is scarcely shown, but its dark prominent nucleus and the beaded fibrils around indicate its position.

Sometimes a comparatively stout dendrite blends directly with a network; sometimes a stout fibre courses up alongside a pyramidal cell, and gives off at intervals extremely fine fibrils to supply the network.

The Junction of Collaterals with the Network.

This is another feature which can be clearly shown. The appearances by which myelinated axis cylinders can be recognised have been previously mentioned, and in some sections very large numbers of extremely fine axis cylinders and collaterals can be seen, but they require very careful looking for, as they are by no means conspicuous objects, owing both to their small size and to the fact that except at the nodes they stain very faintly.

Fig. 2 shows a collateral blending with a network. The axis cylinder passes across the upper part of the picture, and at the dark nodal area near its centre gives off a short collateral, which fuses on to the darkly-stained network around a pyramidal cell, whose outline is roughly indicated by beaded fibrils.

As this collateral remains pale till its junction with the dark fibril, it probably retains its myelin sheath up to this point. In another case the axis cylinder or collateral could be followed for some considerable distance before its junction with the network; its origin was not in the field of section, and there were no beads on it. From what cells do these axis cylinders come? It seems most probable from the pyramidal, because, as already shown, it is from the dendrites of the dark cells that the network arises, and union of their axons also with this structure would result in short circuiting.

If, then, they come from the pyramidal cells, and the unions are not exceptional cases, the unavoidable implication is that these cells also, by a round-about route, are in organic continuity with each other.

Inter-cellular Plexus.

I shall now proceed to give a somewhat fuller account of the inter-cellular plexus, which has already been briefly referred to. It seems probable that Golgi's method does not show it at all ; at any rate, if it does it gives no means of discriminating it from the mass of other details shown.

Again, as the method in question fails to show the network, and as the inter-cellular plexus is essentially a part of this structure, this seems another reason why it should not be revealed by this process.

Golgi's cells of Type 2 have particularly shaggy dendrites. It is from these cells, among others, that the plexus arises, and I imagine that it is at these shaggy points that the chief number of the fine fibrils forming the plexus are given off, and just here, apparently, the silver stain fails, for it shows no further indication of a fibre.

Long ago Gerlach (4) postulated the existence of a diffuse net or felt-work in the grey matter which resulted from the ultimate dendritic branchings of the nerve-cells, and from which originated nerve fibres, which became medullated and (speaking of the spinal cord) formed the dorsal nerve roots. Gerlach's view, therefore, quoting Barker (5), was that "the axis cylinders of motor nerves represent nervous processes coming off directly from nerve cells, while the sensory fibres of the dorsal roots are to be looked upon as nerve fibres arising from nerve cells only indirectly, through the intervention of a diffuse network made up of their protoplasmic processes."

More recently Golgi (6) has supposed the existence of a delicate and intricate inter-cellular network, differing, however, widely from Gerlach's conception. This observer denies to the cell body any participation in the passage of nerve currents ; he believes that the functions of the nerve-cells and their dendrites are purely nutritive. The nerve currents, according to him, pass solely along axis cylinders and their collaterals. He describes two types of nerve-cells, of which Type 1 is motor and Type 2 sensory in function. Now, the axis cylinders of

Type 2 divide and branch in the most profuse manner, and he believes that a dense network results in the grey matter from these diffuse branchings and from the collaterals of cells of Type 1.

Nissl (7) has, within the last few years, also brought forward, on purely circumstantial evidence, the view that there is a dense extra-cellular fibrillary structure, which indeed constitutes, in his opinion, the essential difference between grey and white matter. His view, based largely upon the work of Apáthy and Bethe, is that this felt-work comes directly from the nerve-cells.

Apparently, so far as I can gather, the fibrils of this extra-cellular plexus are assumed to be continuous with the fibrillæ, of which some observers consider the axis cylinder to be formed, and these fibrillæ, running uninterruptedly through the nerve-cell in the unstainable substance, leave it by way of the protoplasmic branches to form the extra-cellular plexus. Nissl admits that at present this supposed structure is quite undemonstrable.

The idea, therefore, of a plexus of nerve fibrils pervading the grey matter has been very generally in the minds of neurologists for many years past, but they have hitherto not been able satisfactorily to demonstrate it.

Now, my method very clearly reveals an extremely dense plexus of delicate, beaded nerve fibrils; indeed, so dense is it, and so fine the individual fibrils, that in successful preparations it gives to the grey matter, when viewed with a low power, an indistinct or slightly blurred appearance.

The fibrils of which it is composed are so extremely delicate that they are barely visible with a magnification of 800 diameters, and although they intersect each other in all directions there are certain appearances which indicate that they do not form a network but only a felt-work, by which I mean that although the fibrils overlap each other they are not joined together at the overlapping points. It is possible, as a rule, when two fibrils intersect, to bring one quite clearly into focus, and thereby fling the other out. Again, it is not at all an uncommon thing to be able to follow an individual fibril for a very long distance—several hundred μ —and these throughout their course give no indication of being connected with any others.

Although this plexus is so exceedingly fine, it is capable of being fairly satisfactorily photographed, but of course such a

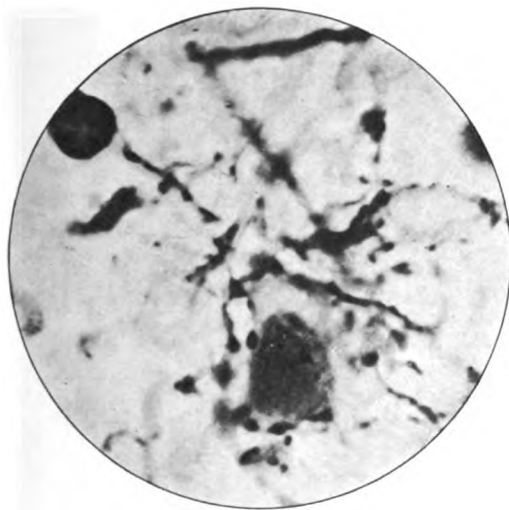


FIG. 1. —Shows a dendrite dividing terminally to form part of network over a pale cell. ($\times 1,360$.)

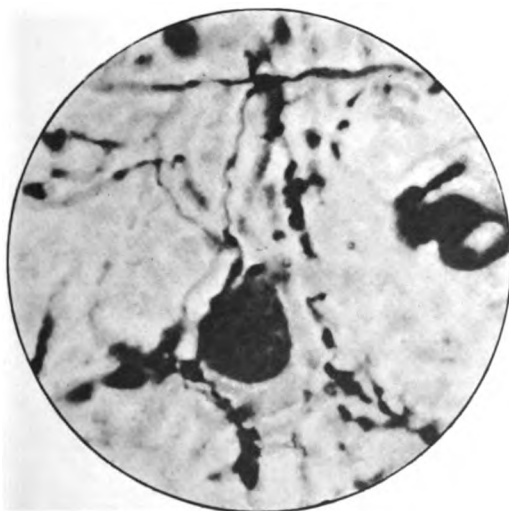


FIG. 2. —Shows collateral making union with network over a pale cell. ($\times 1,380$.)

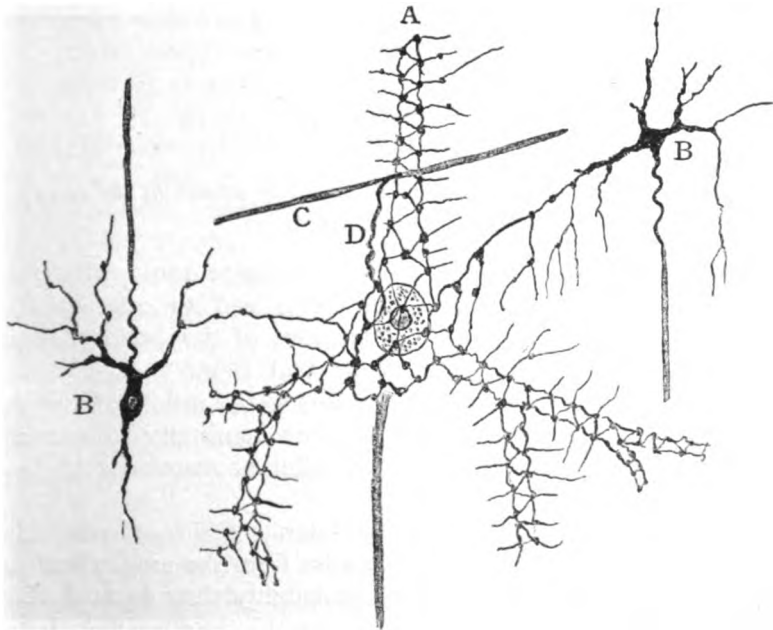
To illustrate Dr. JOHN TURNER's paper.

procedure will give us but a poor idea of the wealth of fibrils concerned, as it necessarily includes those only in one plane.

The fibrils can frequently be traced directly into the network over the pale cells, and where they join there is a bead or thickening, so that there can be no doubt that the inter-cellular plexus and the network form parts of one continuous structure. But the fibrils of the plexus can also, without doubt, be traced to the dark cells, of which they form the ultimate extensions of their dendrites.

No doubt among the myriads of fibrils met with are also many fine collaterals, which one may have a difficulty in distinguishing from the others, especially if not myelinated; but I think that unquestionably the great bulk of the plexus is formed in the manner above described.

Thus it is apparent that the inter-cellular plexus I can demonstrate differs essentially from either that conceived by Gerlach, Golgi, or Nissl, inasmuch as it is not a derivative of the



pyramidal cells at all, but results from the dendritic branchings of an entirely distinct system, *viz.*, the dark-cell system.

The accompanying diagram shows clearly the points that

can be demonstrated by my method and which are directly opposed to the current idea of the relationship which the nerve-cells are supposed to bear to one another. The pyramidal cell (A) (representing my pale-cell system) is invested by a beaded network which extends over its processes as well. The network is practically an extension of the dendrites of the dark cells (B B). One of these latter cells is shown with an axon passing upwards, the other with an axon passing downwards, and both give off collaterals. It will be observed that the dark cells are organically united to each other by means of the network.

Many other fibrils are represented springing from the network, and these, of course, represent the termination of dendrites from other dark cells not shown in the diagram.

A short collateral (D) passing off from the axis cylinder (C) also makes union with the network. The cell to which (C) belongs is not shown in the figure, because I have not yet succeeded in tracing one of the collaterals or axis cylinders which join the network to their cell of origin, but in all probability they are given off by pyramidal cells.

CONCLUSIONS.

Showing some of the bearings of these observations on the current ideas of nerve structure.

The bare facts which I can demonstrate must, whatever interpretation we may put upon them, lead to considerable modification in our views of the structure of the brain cortex. For, in the first place, they show that there is a distinct system of cortical cells which, by means of the ultimate branchings of their dendrites, are in organic continuity with each other through the medium of a peri-cellular network enveloping the pyramidal cells.

And secondly, they show that collaterals also blend with the network, so that if these collaterals arise from the axis cylinders of pyramidal cells, which in all probability they do, and this union is not an exceptional occurrence, this implies that in a round-about fashion the whole pyramidal system of cells is also joined together, and that therefore practically all the cortical cells are in continuity with one another.

Time will not permit of more than a passing reference to the views of other investigators which tend to a similar conclusion, but I shall mention Dr. Alex. Hill's (8) observations on the fusion of the axis cylinders of the granule cell of the cerebellum with one another, and also Held's (9) observations on the blending of axis cylinders with the bodies of other cells, which he has described as occurring in the nucleus of the trapezoid body—a fusion which he terms “a zone of condescence.”

Such observations all tend to show that the rigid conception of each nerve-cell and its processes as a separate entity having no direct connection with other cells (the neuron theory) must be abandoned or greatly modified. I am speaking now of the doctrine of the neuron as formulated by Waldeyer, and which insists on an anatomical independence of cell units. I see that Dr. Mott, in a paper recently read to the Medico-Psychological Association (“Importance of Stimulus in Repair and Decay of the Nervous System,” *Journal of Mental Science*, October, 1902), does not now insist on an anatomical independence, but on a trophic or nutritional, and yet, curiously enough, in another part of the same paper he quotes with approval the experiments of Dr. Warrington, which, if confirmed, show that cells have no such trophic independence. For Warrington shows that if you cut off one system of cells which is in physiological and functional connection with another, the latter is affected and its cells die.

With regard to the interpretation to be placed upon such of my observations as admit of discussion, I would suggest that the difference in staining properties, shape, etc., points to a difference in function, and as we have very good grounds for associating motor functions with the pale or pyramidal system, that the probabilities are that the dark cells are concerned with sensory functions; in other words, that they are the bearers of afferent stimuli.

If this be allowed, then it follows that we can by this method very distinctly show the ultimate termini of the afferent stimuli—the site where ingoing currents end and where outgoing currents are initiated—and this, of course, will be at the network and its contained cell.

In my second paper to *Brain* I pointed out that whilst in the cerebral cortex the pale cells far exceed in number the

dark, in the cerebellar cortex an opposite condition exists, and I mentioned how well this fact harmonised with Herbert Spencer's conception of the cerebrum as the great organ for the co-ordination of movements in sequence, and of the cerebellum as the organ for the co-ordination of movements in simultaneity. But if we may assume that the dark cells are conductors of afferent stimuli, it follows also that nerve currents do not invariably flow in one direction, *viz.*, from the dendrites towards the cell body and thence outward by its axis cylinder, a view which is very generally held. The current must flow to the dark cells by way of their axis cylinders, and from thence to the network by way of the dendrites, whilst in the pyramidal system, of course, it will pass in a reverse direction. But inasmuch as it can be shown without doubt that certain of the dark cells of the cerebellar cortex envelope the bodies of the antler cells with a basket arrangement formed by the splitting up of their axis cylinders or collaterals, then, if these cells also form part of the afferent system, in them the current flows in a reverse direction to what it does in the rest of the cells of this system.

Such conclusions may not seem satisfactory, but we must remember that the upholders of the one-way doctrine have equally awkward facts to face, *viz.*, in the case of the cells of the posterior spinal ganglia. These, as is well known, are unipolar cells, and the single process divides by a T-shaped junction not far from the cell. Now this process has all the characters of an axis cylinder; above all, it is myelinated. And yet, to meet the requirements of the advocates of this theory, we are asked to believe that one half of the T-shaped process is not an axis cylinder at all, but a dendrite, which, in this solitary instance, has taken on all the anatomical peculiarities of an axis cylinder.

These suggestions are, however, only tentatively offered, for inasmuch as my method fails to display any of the complicated structures which we have good reasons for supposing are concerned in the formation of the pyramidal cells, and in the face of the important results obtained by Apáthy (10) and others in leeches, which show a most complicated system of fibrils pervading the whole nervous system and apparently passing uninterruptedly through the nerve-cells, it will be well for the present to keep an open mind on many points concerning the

intimate relationship of the cells to one another. But, however much we may feel induced to apply conclusions drawn from such lowly organisms to those so much higher in the scale, we must, of course, give the chief place in our consideration to observations actually made on human brains, and however perplexing and difficult it may at present appear, yet these conclusions from invertebrates must be made to harmonise with details of structure demonstrable in man before they can be accepted as applying to human cerebral anatomy.

In the discussion which followed the demonstration of my specimens at the British Association meeting, Professor Schäfer said he was satisfied as to the general accuracy of my facts, but dissented from some of the interpretations put upon them, *e.g.*, in reference to conduction both ways along cell processes, he did not agree that there was sufficient justification for looking on the dark cells of the cerebrum and the cerebellum as similar in function. He referred to the fibres coming from the thalamus, which Golgi's method shows with free endings in the cortex in proximity to the processes of the pyramidal cells, and suggested that stimuli from these fibrils might excite not only the pyramidal cell, but at the same time the dark cells by means of the network; and he suggested that the dark cells represented a system conveying stimuli in the same direction as the pyramidal system, *viz.*, from the dendrites to the axons, and about the functions of which we knew nothing whatever.

Many objections can be urged against this view. Apart from the inadvisability of introducing a system of cells into our conception of the structure of the cortex, about the functions of which we are ignorant, it is difficult to conceive of the efficacy of a stimulation so vague and dispersed as would result from the excitation of this system in the manner which Professor Schäfer suggests. Admitting, as he does, that the dark cells are joined together through the medium of the network, an excitation applied to this structure in the above manner would only result in a diffuse stimulation extending in all directions along the fibres of the inter-cellular plexus, over an area proportional to the strength of the stimulus, and could not affect any one particular cell or group of cells.

The very accurate adjustment of the network to the pyramidal cell and its dendrites points strongly, I consider, to this structure being concerned in the excitation of its enclosed cell.

The meaning of such a disposition of the network is, according to Professor Schäfer's view, difficult to perceive.

Although in its scope my method at present falls far short of the Golgi method, yet in the particular regions where it succeeds it reveals far greater detail and delicacy of structure.

I believe that wherever Golgi's method shows us collaterals or axons ending in proximity to dendrites of pyramidal cells, we must go a step further and presuppose the existence of an actual junction with a network, neither the connecting fibril nor the network being shown by Golgi's method.

The assumption that stimuli pass only in one direction along cells and their branches, rests, so far as I know, on purely anatomical considerations. Such physiological evidence as we have, although perhaps not conclusive, appears to show that stimuli pass both ways. Thus long ago Kühne's experiment with the gracilis of the frog demonstrated the passing of stimuli both ways, and more recently Budgett and Green (*American Journal of Physiology*, 1899, iii, p. 115) have succeeded, after section of the left vagus above its ganglion, in joining it to the peripheral cut end of the hypoglossal. When such a preparation, two or three months after the operation, is excised, together with the tongue, excitation of the peripheral end of the vagus causes the tongue muscles to contract, showing that stimuli can pass up the vagus to take effect on the tongue muscles.

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Insanity in Imbeciles. By A. F. TREDGOLD, L.R.C.P.Lond.,
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INSANITY is rarely met with in the more pronounced grades of amentia. In the milder degrees of imbecility, however, such a complication is far from being infrequent, and out of over 200 imbeciles whom I examined in the asylums of the London County Council, considerably more than half had at one time or another been insane. Of course it is impossible from these figures to deduce the actual proportion of all imbeciles liable to be so affected, but they sufficiently attest the frequency, and therefore the importance, of this condition. The exceedingly scant attention which the subject has received in this country is a further excuse for the following remarks.

The general characteristics of these higher-grade imbeciles are too familiar to necessitate any description here, but it may be remarked that an excellent indication as to the existence of a mild degree of amentia is furnished by the history of the progress, or, rather, want of progress, during school life. It is one of the commonest things to hear the mothers state that "he could never learn at school," and it is the rule to find that these children have not passed beyond the third, second, or even the first standard, arithmetic in particular being a great stumbling-block. In addition, they may have been late in learning to walk and talk, and dentition and development generally have been delayed; also in a considerable number of them well-marked stigmata of degeneracy are present.

But although all the cases of insanity in imbeciles that I have hitherto seen have been in those of high or medium grade, it by no means follows that *all* high-grade imbeciles are liable to be so affected. In them, as in individuals of normal development, a special predisposition appears to be necessary, the presence of which is, as a rule, easily recognisable.

It will nearly always be found that those imbeciles who subsequently become insane have for some years before the actual outbreak been prone to sudden fits of irritability, "bad temper," moroseness or sulkiness, often accompanied by acts of violence; or that they have been in the habit of wandering

away from home, in many instances being brought back by the police ; or they have evinced a restless disposition, making it impossible for them to settle down to any kind of employment. Indeed, from a very early age these patients have been a source of endless worry and anxiety to their friends and relations, or, should they have been in an institution, to the attendants and other inmates. Such characteristics are by no means typical of all higher-grade imbeciles, many of whom are placid, harmless, and industrious to the end of their days, and although their mental deficiency renders it impossible for them to make any headway, they are, nevertheless, capable of useful employment, and in many cases of earning their own living. Neither can such conditions be well described as insanity, though they are, I believe, the shadow of the coming event, being evidence of that special predisposition which will sooner or later terminate in insanity. Perhaps the best term for it would be mental instability, and the higher-grade imbeciles may therefore be divided into the two groups of *mentally stable* and *mentally unstable*.

This instability appears to me to be by far the most important factor in the causation of insanity in these patients, and exciting causes seem to play but a minor part. It is true that in some cases the latter may act as contributory factors, [e. g., alcohol, religious or other forms of excitement, or a severe fright causing great emotional disturbance], and help to hurry on the attack which was only threatening ; but at the most they only bring matters to a crisis somewhat earlier, and in many cases are entirely absent. I would say that, given a high-grade imbecile whose mental condition is unstable, the chances of his passing through the third decade without becoming insane are very small indeed. Could the education of such an individual be more carefully supervised and better adapted to his capabilities from a very early age, and could his youth and adolescence be passed in an orderly and systematic manner, devoid of the bustle incident to the daily life of most of the poorer classes, it is possible that the attack might be deferred, or even entirely prevented. As things are, however, the first attack of insanity usually appears between the ages of puberty and adolescence. Institution life of the right kind, if begun sufficiently early, would probably do much for these patients, and I have frequently found that even

where the surroundings are adverse the instability may be to a certain extent controlled by a free use of the bromides.

As to the probable nature and cause of this instability, we may obtain some light by referring for a moment to what is known of the etiology and pathology of amentia. It is now well known that amentia is the final manifestation of what may be termed the neuropathic diathesis, and in an inquiry into its *etiology* which I made two years ago⁽¹⁾ I was enabled to show that in 90 per cent. of cases morbid hereditary influences were present, and that these, in all probability, act by interfering with the normal growth of the germinal plasm. If the morbidity is very pronounced its effect upon the growing embryo is extensive, upon the nervous system causing gross amentia, upon the body generally causing the stigmata with which we are all familiar. With a less pronounced morbid influence, the normal development is less interfered with, and the more specialised parts of the growing embryo, *i.e.* the higher portions of the nervous system, are chiefly affected, giving rise to a mild degree of imbecility.

The result of recent *pathological research* shows that the degree of mental deficiency present during life is directly proportionate to the amount of change discoverable in the brain under the microscope, and that, speaking generally, whilst the brain of the idiot is characterised by a paucity of imperfectly developed and irregularly arranged nerve cells and processes, in that of the imbecile the cells much more nearly approach the normal in both their number and degree of development, the principal change being an irregularity of arrangement. Further, in the milder degrees of imbecility the changes appear to be almost entirely confined to the second and third cortical layers (small and medium-sized pyramids), and to the frontal and parietal regions of the brain; in gross idiots imperfectly developed cells are more noticeable in the same cell layers and regions, but are also to be found throughout the entire brain; indeed, in some of these cases I have seen the cells of the spinal cord affected.

There can be no doubt that the different degrees of pathological change which occur in these cases are the cause of the great variations of mental capacity which exist in the various types and degrees of amentia, and that, whilst the idiots scarcely develop beyond mere automata, capable of little

beyond reflex action, the higher-grade imbeciles are possessed of good perception, of memory, of emotion, and of ideation. They are, however, deficient in the power of concentration, of continued application, and of comparison, their appreciation of their surroundings being therefore inaccurate, and their higher faculties of deliberation, judgment, and control remaining undeveloped.

We may therefore conclude from our *clinical* knowledge of these cases, from *histological* examination, and from *etiological* considerations, that in the higher-grade imbeciles the arrest of development has involved more particularly or exclusively what are called the "higher" portions of the brain, and that the lower faculties have attained a fairly normal development. These lower faculties, however, require for their useful and proper action to be constantly controlled and corrected by those of a higher order, and when these latter are deficient the equilibrium of the brain is unstable, and the various manifestations of mental instability which have been described are very liable to occur.

The faculties of ideation and emotion, which are usually well developed in high-grade imbeciles, are especially in need of this higher inhibitory action, since there can be no doubt that the uncontrolled and uncorrected action of either of them may seriously endanger the individual's sanity. It is therefore not difficult to see how this condition of mental instability may readily develop into a state of true insanity, the nature of which will depend largely on whether the disturbance is of an ideational or emotional type.

In one class of these imbeciles *uncontrolled ideation* can be readily demonstrated. The original idea may be of the most simple description, and the result of an impression received by one of the ordinary sensory channels, or in some cases it may be caused by an hallucination of sense (auditory or visual); but since the patient is incapable, by reason of his mental deficiency, of correcting or controlling the primary idea, it rapidly assumes such dimensions as to entirely alter his mental attitude towards his surroundings. Hence delusions result, which may be of various kinds, as of identity, of persecution, etc.; these may remain fixed or be subject to rapid change, but their persistence soon brings about a condition of mania or melancholia in most instances.

Thus in some of these cases of mild imbecility I believe that the patients themselves are, to a certain extent, conscious of their infirmity, and do not fail to notice that they are somewhat neglected, put on one side, and "of no use." As a result of this they acquire a habit of brooding over their fancied wrongs, pronounced delusions of persecution soon follow, which rapidly pass into a state of acute melancholia, in which they may attempt suicide. It is very common to find this type of patient complain that he has "not had fair play."

Delusions and hallucinations, therefore, figure largely in the ideational type of insanity, and as a rule their presence is easily recognised.

Uncontrolled emotional action is characteristic of another class of imbeciles. I have already stated that emotional storms of a transient nature are very common in many of these patients for perhaps years before the actual outbreak of insanity, and it is probable that such are very closely allied to true insanity; their short duration, however, renders it practically impossible to certify these patients as lunatics at this stage. But in course of time the outbreaks become more severe and prolonged, until finally they may last for several weeks and present every feature of acute mania or melancholia.

All the cases of insanity in imbeciles which I have seen conform at first to one or other of these types, and they therefore appear to be the direct consequence of the imperfect development of the higher mental faculties, with its associated instability. As already stated, however, many imbeciles are of perfectly stable equilibrium, and in such I believe the ideational and emotional faculties to be also imperfectly developed, so that overaction in either of these directions does not take place. It is certainly a fact that the unstable ones are the brighter and more vivacious of the two.

In this connection it is interesting to consider for a moment the insanity which is frequently present in association with primary dementia. The physical basis underlying this condition has been demonstrated to be a degeneration of, *inter alia*, the cells of the cerebral cortex, and although the process varies greatly in rapidity it appears to be essentially the same whether the disease is an acute degeneration, like general paralysis, or a more chronic change, like senile dementia; in fact, many cases occur which are intermediate

between these two extremes, and which cause considerable doubt to the pathologist and the clinician as to the class in which they should be placed. For our present purpose it is an unimportant matter whether this form of degeneration be considered as primarily neuronie or primarily vascular, the essential point being that it is a pathological change which affects the cortical layers in varying degrees, and, as a rule, those of a higher order, and whose action is chiefly inhibitory, first and most. Consequently in many of these cases a disturbance of the equilibrium is brought about analogous to that occurring in mild amentia, with the result that there is a great liability to ideational and emotional disturbances, readily passing into insanity. Since, however, the degeneration is a progressive one, a stage is at length reached at which all mental processes are annihilated (complete dementia), the individual being reduced to the vegetative condition of the gross ament. The insanity in these cases, therefore, is but temporary, being symptomatic and an incidental phase of the underlying degeneration.

I have said that insanity "frequently" occurs in these cases because, as in high-grade imbeciles, it is not universal, and numerous cases of both general paralysis and senile dementia run their course without its appearance.

It has been stated that in these imbeciles the first attack of insanity usually appears between the ages of puberty and adolescence, and it will be remembered that this is the age at which the ideational and emotional faculties are conspicuously active in the healthy individual. Here, however, the higher processes of deliberation and judgment, by their controlling influence, prevent a disturbance of the mental equilibrium sufficient to produce insanity, although they do not always prevent the youth from making a fool of himself; and with further experience the imaginations, day dreams, and castles in the air ripen into originality of thought and breadth of intellect, whilst the fulminating emotion of youth becomes the righteous indignation of mature age.

I am inclined to think that the age at which the insanity appears not infrequently leads to these cases being diagnosed as adolescent insanity, and several undoubted imbeciles I have met with in asylums have been so classed. The question is important from the prognostic point of view, and although a

correct diagnosis is not always easily arrived at during the actual attack of insanity, a careful examination of the patient as this abates, with a history of his previous condition from the parents, usually suffices to make it perfectly clear whether he is really imbecile or not.

Let us now turn to the *clinical features of the insanity* from which these patients suffer. On the whole they closely resemble those occurring in ordinary patients, so that it is unnecessary to enter into any very detailed description. There are, however, a few points which must be noticed.

The insanity is chiefly mania or melancholia; mania is the most common form, occurring in about 55 *per cent.* of all cases, melancholia in about 40 to 45 *per cent.* Monomania and pure delusional insanity must be very rare if they occur at all, for I have not seen one case. General paralysis occurs probably to the extent of 2 to 3 *per cent.* Delusions can be ascertained in about two thirds of the cases; hallucinations are also very common. I have excluded all those cases of insanity in which epilepsy was also present, thinking it better to deal with epilepsy in imbeciles separately on a future occasion.

These figures will give some idea of the prevalence of the different clinical types as ordinarily described, but since all these cases may be referred to a disturbance of either the ideational or emotional faculties, they may more advantageously be considered from this aspect.

In the *ideational variety of insanity*, to which the greater number (about 80 to 85 *per cent.*) of the cases belong, delusions are a prominent feature, although they are not always to be readily elicited; in a quarter of these cases hallucinations also exist, usually of an auditory, somewhat less often of a visual nature. These delusions, as already mentioned, are generally simple, such as those of persecution or identity; I have never met, amongst these imbeciles, such elaborate delusions as are common amongst ordinary lunatics, the most complicated being that of a youth who was under the impression that he "had fallen to pieces and lost some of his parts," and a girl who thought that "people drew her brain and used her thoughts up"; in these cases the delusions only lasted for a few weeks, and it is rarely that they persist unchanged as long as this.

In some of the cases the existence of delusions can be

ascertained for days, and occasionally for some weeks, before any more acute mental disturbance ; but sooner or later acute mania or melancholia supervenes. Delusions of a persecutory nature are usually accompanied by melancholia, those of identity by mania ; but this is by no means invariable, and on the whole the nature of the acute insanity seems to be chiefly dependent upon the temperament of the patient, mania predominating more in males and melancholia in females.

Acute *mania* occurs in rather more than half these ideational cases, the patient being in a state of ceaseless activity day and night. He is constantly talking, shouting, or singing, his language being often of the most vile description ; he tears up his bedding and clothing, smashes windows and breaks furniture, his destructiveness being often so great that confinement in the padded room is necessary ; personal attacks upon the attendants and other patients are by no means uncommon, and in some cases I have seen, the imbecile has attacked his relatives with a knife and other weapons ; one youth of 13, in addition to assaulting a girl with a knife, made a determined attempt to set fire to the house.

One of these patients, who was recovering from such an outburst, accounted for his actions by saying that he "got some thought on his mind which he tried to get off and couldn't ; this caused the blood to rush to his head and sent it rushing down his arms and legs;" not a bad explanation for an imbecile !

Melancholia is the form assumed by the insanity in nearly half the cases. This is a much greater proportion than in the non-imbecile class of lunatics, the probable explanation being that the temperament of these patients is more apt to be gloomy, owing to their general health being poor. Both active and passive varieties of melancholia occur, the first being somewhat more common. In the active form the condition appears almost invariably to be associated with terrifying delusions. Thus, one young girl was frightened by seeing a fight in the street, she became timid and anxious, and in a few days developed pronounced delusions to the effect that people were trying to kill and burn her ; she heard voices threatening her, thought her food was poisoned and refused to eat it, and was apprehensive of danger from every imaginable quarter. She was constantly in tears, wringing her hands, and

muttering, "What are they going to do to me?" Case No. 3, in the Abstract of Cases, is a similar example.

In the passive form of melancholia the patients are silent and depressed; if they can be got to converse at all their remarks will generally be to the effect that they are "tired of life and want to die," and, indeed, attempts at suicide are by no means uncommon. More often they are utterly apathetic, refusing to wash, dress, or take food, entirely careless of personal cleanliness, and resisting any attempt to attend to these matters for them. At times actual stupor may be present, occasionally so intense as almost to amount to catalepsy, and the state of these patients so closely resembles dementia in many ways that recovery or remission is often the only distinguishing sign.

Suicidal attempts occur in two-thirds of these melancholic patients, and they are real and definite efforts to put an end to existence, unlike the somewhat feeble impulses which are common in the insanity of an emotional type, to be presently referred to. The feeling of misery and depression may be responsible at times, but in many instances it is the result of delusions of persecution, the patients feeling that everyone is so much against them that suicide offers the only way out of their difficulties; or in other cases they hear voices telling them to make away with themselves. Death by drowning would appear to be the most attractive method. In the same way the refusal of food occurring in half the cases may be either the result of delusions that the food is poisoned, or part of the general condition of utter indifference to surroundings.

Whether the mental disturbance be mania or melancholia, it usually subsides within a comparatively short time; improvement may be noticed at the end of a week, or the acute condition may persist for a month or more, but in 60 to 70 *per cent.* of cases it has entirely disappeared in two or three months. The mental deficiency, which had been to some extent masked by the insanity, is then perfectly obvious. Seeing the patients again quiet and tractable the parents not infrequently desire, and obtain, their discharge, but any hopes they may have of permanent recovery are nearly always doomed to disappointment, for, as far as my experience goes, there is scarcely any class of patient in whom recurrence of the insanity is so likely to take place. It is true that occasionally nothing further is

seen of one of these imbeciles after his discharge from the asylum, but of the greater number it can safely be said that within a few months, or at most a year, they will be back again. There is also no doubt that recurrences are more favoured by a life at home than by the routine of an institution, and if these patients cannot be kept in a general asylum, it would be better to transfer them to a special establishment than to set them at liberty.

As a rule the second and subsequent attacks are of the same clinical type as the first, and they continue to occur at periods varying from three to twelve months for many years. In the intervals the patient is fairly quiet and may do a certain amount of work in the wards and out of doors, although his mental deficiency and instability usually prevent any regular and systematic employment. With the lapse of time the insane attacks tend to occur more frequently, and the patient eventually passes into a state of chronic insanity which is only terminated by the onset of dementia.

In a small proportion (probably about 15 *per cent.*) the subsequent attacks are different to the primary one, and the patient who was at first maniacal becomes melancholic, or *vice versa*, this condition of depression, alternating with exaltation, continuing for years. In the end, however, the patient tends to become more and more apathetic until dementia is established.

In about a third of the cases there is no recovery from the first attack; the mania or melancholia, although becoming lessened in their intensity, still persist. The patient remains for some years in a state of chronic insanity, which almost invariably terminates in dementia.

The *emotional variety of insanity* differs from the ideational in several important features. The attacks are violent storms, entirely independent of hallucinations or delusions, or, as far as can be ascertained, of any ideational process. They resemble the fits of "temper" and hysterical outbursts already alluded to, probably also the transient outbreaks of rage and passion frequently seen in gross idiots; but they differ from these in their intensity, and in being of longer duration. Occasionally it seems as if they might be the result of some trivial altercation, and it is nearly always said of these patients that they cannot bear to be "crossed"; more often, however, the attacks

appear to be entirely spontaneous. Notwithstanding their resemblance to the milder forms of emotional disturbance, their duration and the intense mental agitation make it impossible to look upon them as other than true insanity.

The condition is not nearly so common as the ideational form of insanity, and probably only occurs to the extent of 10 to 15 *per cent.* of all the cases ; further, it is almost entirely confined to the female sex. The patients are, as a rule, very plausible, and in between the attacks of a gentle and pleasant disposition. The degree of mental deficiency is usually slight, though definite.

The mental disturbance may be exaltation or depression, mania, however, being the more frequent, and one never sees in these cases the state of profound melancholia that is elsewhere met with. The mania may give place for a period to sullen obstinacy or listless apathy, with perhaps refusal of food and threats or even attempts at suicide, or the patient may become tearful and obviously miserable ; but I have never seen the intense apprehension of approaching harm, or the state of abject terror which mark the ideational melancholiacs ; also in these cases threats of suicide are more common than attempts, and where the latter occur they are of a feeble and half-hearted description, or are obviously the sudden yielding to a childish impulse.

The mania is often extremely violent, and the patient will rush about for days gesticulating, singing, shouting, using abominable language, and smashing everything within reach ; the attacks, however, are of shorter duration, and do not so readily tend to pass into a chronic stereotyped condition as in the patient suffering from delusions. On the other hand, recurrences are more frequent, it being unusual for more than two or three months to intervene between the attacks, and as a rule the periods of quiescence are much less than this.

Many of these patients certainly seem to improve somewhat under firm and judicious treatment, and the diminished severity and frequency of the outbursts would appear to indicate that their power of control is, in some degree, capable of development, probably never to a sufficient extent to enable them to be freed from supervision, but enough to fit them for a certain amount of useful work. The future of these patients depends largely upon the patience and intelligence of the charge attendants.

In many ways these emotional attacks bear a close resemblance to the sudden seizures of the epileptic, and they are also probably analogous to the various forms of impulsive and moral insanity, and to the cases of extreme cruelty which are occasionally recorded of lunatics; indeed, some of these imbeciles are subject to uncontrollable impulses in definite directions, in addition to the maniacal outbursts. Thus one girl was a most inveterate liar, and another was quite unable to resist pilfering small articles from the other patients or from the work-basket as soon as the nurse's back was turned.

I believe that most cases of insanity in imbeciles may be readily referred to one or other of the above-mentioned groups. Insanity with delusions, however, does not exclude the possibility of emotional storms, and patients suffering from insanity of emotional type may occasionally have delusions. Cases Nos. 7 and 8 in the appended abstract are good examples of this.

DEMENTIA.—*Primary dementia* in imbeciles is of such rare occurrence that if the signs of dementia make their appearance without antecedent insanity or epilepsy the case will in all probability turn out to be one of general paralysis. *Secondary dementia*, however, is the natural termination of most of these cases of insanity; its advent depends chiefly upon the type and the frequency with which recurrences occur. In the emotional form it is decidedly rare, and I have known such patients show no sign of dementia after the lapse of fifteen years. In the ideational form, on the other hand, it is common, and the shorter the intervals between the attacks the earlier does the dementia appear. In some cases it is well marked within two or three years; some may possibly continue for from twelve to fifteen years without any sign occurring, but on the average symptoms are observable within about eight years.

GENERAL PARALYSIS.—My figures are not sufficiently numerous to enable me to state definitely to what extent this occurs, but amongst rather more than 200 imbeciles I met with six instances (three males and three females). The disease may be of the adolescent or of the ordinary variety, but although a few cases of the latter have been recorded I have not myself seen an example of it in an imbecile. Accepting the view that syphilis is the most common cause, one would suppose that the state of the nervous

system of the imbecile would render him particularly liable to its action should he become infected ; possibly, however, the explanation of the comparative infrequency of the ordinary variety of general paralysis in imbeciles may be that they are not so much exposed to the chances of syphilitic infection.

In my cases the symptoms first made their appearance between the ages of fourteen and nineteen years, all the patients being well-marked imbeciles. In three of them delusions of persecution were present, accompanied at one time by attacks of mania, at another by profound depression with attempts at suicide. In the other three cases the mental disturbance consisted of emotional storms like those already described. These conditions persisted with occasional exacerbations and remissions for from one to two years, when signs of dementia appeared. Up to the time of writing four of the patients have died with the unmistakable physical signs, the diagnosis being confirmed by microscopical examination ; and the remaining two are in the last stage of the disease.

The adolescent form of general paralysis has been so fully discussed by many writers that any further description is here unnecessary, since the clinical features in imbeciles do not materially differ from those in ordinary patients. It is possible that in the early stages of the disease the imbecile might be thought to be suffering from ordinary insanity, delusions of grandeur being rare, and there being nothing peculiar to the mental change. But if the history shows that the patient has not previously given indications of mental instability, and if, further, there should be marks or a history of syphilis, the case in all probability will be one of general paralysis. The supervision of dementia within one or two years (earlier than in the ordinary insanity of imbeciles) makes the diagnosis practically certain, although even at this stage there may be none of the ordinary physical signs of dementia paralytica. It is perhaps more common for an error of diagnosis to be made in the opposite direction, and for a normally developed patient suffering from adolescent general paralysis to be regarded as an imbecile, the early dementia being mistaken for amentia.

It may be added that in these four imbeciles which I have had the opportunity of examining *post mortem*, the naked-eye appearances of the brain were precisely similar to those occurring in ordinary cases. Microscopically the changes are

also much the same, with the exception that in the imbeciles there appears to be rather less *acute* cellular disintegration and less marked structural vascular change.

The appended abstracts of a few cases illustrate some of the points mentioned in this paper.

CASE 1. *High-grade imbecile ; attack of acute mania with delusions lasting six weeks ; recovery ; discharge.*—C. H. C—, No. in series 180. A high-grade imbecile with several well-marked stigmata of degeneracy, said to have always been very excitable, no regular employment. Admitted to asylum æt. 16 with acute mania of three weeks' duration. He had suddenly become noisy and sleepless, throwing himself into strange attitudes, utterly irrational in his conversation, shouting out "God save the Queen," and asking to be allowed to fight the Boers ; alternating with this he was tearful and anxious, with delusions of being constantly followed by policemen, and by boys who called "thief" after him. He was in a state of restless agitation, begging for the door to be kept locked. For a week after admission to the asylum he remained in this excited condition day and night, and it was quite impossible to control him. He was terrified of the other patients, thinking they were all trying to strangle him. After a week he gradually became quieter, and at the end of two months had become so quiet and well behaved that he was able to be discharged. Up to the present (one month after discharge) I have heard nothing further of this boy, but it is highly probable that he will be again admitted before very long.

CASE 2. *Medium-grade imbecile ; attack of acute mania with delusions and hallucinations, subsiding in two months ; subsequent recurrences for two years ; signs of dementia.*—A. C—, male, No. in series 2. Has always been backward, and never learnt to read or write. After leaving school earned a few shillings weekly by doing odd jobs, but had no regular employment. Apt to behave queerly at times from early boyhood, and on several occasions disappeared from home for two or three days. At the age of twenty-four began to attend music-halls frequently, and shortly afterwards became exceedingly strange in his manner ; he refused to do any work, and spent most of his time standing at the open window talking to

people he imagined he saw. Much of his conversation was about one Flo Arnold, whom he wished to marry, and for which purpose he said he had taken £2 out of the bank. He gradually became quarrelsome, and finally violent and acutely maniacal, and had to be sent to the asylum. This condition of mania, with delusions and aural hallucinations, lasted for two months, after which he became quieter. He has now been in the asylum for nearly two years. He is subject from time to time to sudden outbursts of maniacal excitement lasting from a few hours to several days; these are probably due to delusions, although none can be ascertained. He shows indications of the onset of dementia.

CASE 3. *High-grade imbecile; attack of melancholia with hallucinations and delusions, passing into a condition of recurrent insanity; signs of dementia in six years.*—C. D—, male, No. in series 3. He could never learn arithmetic at school, as the master said his brain was too weak. Used to behave very oddly at times. After leaving school was employed in a boot-shop. At the age of sixteen he was frightened by a large black dog, and shortly afterwards became much depressed, gradually passing into a condition of melancholia. On admission to asylum he was found to have aural and visual hallucinations with delusions. He thought he was surrounded and threatened by black men; he said that he was afraid he was going to be killed in the China war, and that God told him to kill himself. For several days he was restless and anxious, afterwards becoming dull, listless, lethargic, and a confirmed masturbator; he would occasionally waken out of this stuporose condition to become aggressive and violent. Four years after admission he had so much improved that he was discharged to his friends, only to be readmitted six weeks later, as they found it impossible to manage him. He is now twenty-two years of age and is still in the asylum, being idle, and as a rule dull and depressed and constantly muttering to himself; occasionally destructive and aggressive; signs of dementia are apparent.

CASE 4. *Medium-grade imbecile; attack of melancholia with attempted suicide; recovery in four months; relapse eight months afterwards; now again recovering.*—T. K—, male, No. in series 53. Mental deficiency noticed from early childhood;

incapable of learning at school ; no work subsequently ; never earned any money. Gave much trouble to his parents, being "very bad-tempered," and frequently wandering away from home. At sixteen years of age became much depressed, and attempted suicide by taking carbolic acid. On admission into asylum was wretched and tearful, saying that he wanted to die, and there was no reason why he should live. He gradually became brighter and even cheerful, and a month after admission was able to work out of doors ; the improvement continued, and he was discharged in four months. Eight months later he was readmitted, having been found by a policeman battering his head against some iron railings. On the way to the station he said that he would kill either himself or his father, the latter stating that he had been violent and had attempted to cut his (the father's) throat. He was profoundly depressed, thought he heard voices, and that people had conspired to kill him. At the present time he has been in the asylum four months. He is still depressed and solitary, but on the whole decidedly brighter, doing a little work, and appears to have lost his delusions.

CASE 5. *High-grade imbecile ; acute mania of emotional type, æt. 16, passing into a condition of recurrent insanity ; no dementia after three years.*—A. F—, female, number in series 66. "Always simple from quite a child." Left school æt. 12, being only in third standard ; afterwards in a training home ; very bad-tempered and addicted to smashing windows ; sent home after three years, as they found they could do nothing with her. At the age of 16 she became so violent that she had to be removed to the asylum, having previously hurled a cooper's hammer at a man and thrown a heavy padlock at a woman. She remained in a condition of maniacal excitement for three months, with an occasional short interval of comparative calm. During one of these I asked her why she behaved so violently ; she said something came over her and she felt she "must do it." In three months she had become much quieter, and for the following five months she remained silent and gloomy, refusing to have anything to do with the other patients ; then she relapsed into a state of restless excitement lasting for a month, followed by another period of depression. She is now 19 years of age, having been in the

asylum three years. She is at times fairly quiet and does a little ward work, but is very untrustworthy, and liable to sudden outbursts of maniacal excitement with destructiveness; she is highly emotional and unstable, bursting into a fit of tears or laughter without any apparent cause. There are no indications of dementia.

CASE 6. *Medium-grade imbecile; attack of acute mania of emotional type, æt. 14; condition practically unchanged at the end of six months.*—C. R—, female, number in series 63. Never passed first standard at school; subsequently kept at home; could never be depended upon; and from 9 years of age has been at times very violent and addicted to using disgusting language. She had to be sent to the asylum at the age of 14, and on admission was in a state of mania, chattering to herself and singing or shouting the whole day; at times destructive and aggressive; very restless at night. She has now been in the asylum for six months, and on the whole there is very little improvement. She is occasionally fairly quiet and rational, but as a rule she is raging up and down the wards singing, shouting, and swearing at the other patients. The charge-nurse says she is her most troublesome patient. She will probably remain in this state until the advent of dementia.

CASE 7. *High-grade imbecile; attack of acute mania of emotional type, æt. 16; constant recurrences, at times accompanied by delusions; under observation four years, no improvement.*—R. D—, female, No. in series 82. Very backward at school; left æt. 13 and went to service, but was so liable to what her mother calls "fits of temper" that she could not keep any situation more than a few months; altogether she had fourteen situations in less than three years. At the age of 16 she became so violent that she was sent to the asylum. On admission she was in a state of acute mania, screaming, shouting, singing, and resisting all attempts to keep her in bed; she also threatened to cut her throat. This condition lasted for a few days after admission; she then became quieter, and by the end of a fortnight was doing some work in the wards. Within a month she had a relapse exactly similar to the first attack. She is now 20 years of age, and has been in the asylum four years. At times she is quiet, well-behaved, and answers questions readily and pleasantly; it is, however, quite

impossible to depend upon her, and she is subject from time to time to sudden outbreaks of excitement, in which she becomes most abusive, uses the foulest language, and violently attacks anyone who may be in her way. These attacks last for three or four days and nights; as a rule, they seem to be purely emotional storms, but in some of them delusions are present, generally to the effect that the medical officers and the nurses are trying to cut off her head or to torture her in various ways. I see no prospect of any recovery in this case.

CASE 8. *High-grade imbecile; attack of acute mania subsiding in three months, followed by frequent recurrences; under observation for seven years without any improvement.*—E. S—, female, No. in series 101. Noticed to be simple-minded from birth; did not get on at school; subsequently kept at home to help mother, "as she did not seem to have enough sense to go out to work;" was at times very troublesome, and caused much annoyance by suddenly rushing into the neighbours' houses. At the age of 16 became so restless and excitable that they could do nothing with her, and sent her to the asylum. The medical certificate states "she exhibits undue mental excitement, talks, sings, shouts, and laughs immoderately, and behaves in an insane manner; very restless, imagines the attendants to be her former school teachers, and seems altogether too excited to control herself and talk sensibly." This acute condition gradually abated, and by the end of three months she had become quiet and able to do work; two months later she relapsed, again becoming excited, noisy, and destructive day and night, in which state she remained for three weeks, then becoming quiet and industrious again. She has now been in the asylum seven years, has ceased to do any work, and is subject to frequent acute outbreaks, becoming noisy, destructive, and aggressive. In some of these attacks delusions are present; thus a short time ago she stated that she had given birth to a child, which had been stolen from her in the night. She is very impulsive, and on one occasion, seeing a pail of water standing in the ward, she suddenly plunged her head into it. She is becoming untidy in her dress and personal appearance, though there are as yet no other indications of dementia.

(1) "Amentia—its Etiology, Classification, and Pathology," *Archives of Neurology*, vol. ii.

On the Training of Nurses in Institutions for the Insane.

Abstract of a paper by BEDFORD PIERCE, M.D., M.R.C.P.,
Medical Superintendent of the Retreat, York.

ALL will agree in the wish to secure the services of intelligent high-principled women upon the nursing staff of our institutions for the insane. I myself, and no doubt many will agree with me, believe that we are more likely to obtain this kind of woman from amongst the middle class than from the artisan or domestic servant class ; and I am prepared to go further, and say that the well-educated portion of the former (the upper middle class) is most likely to supply the best type of woman for our purpose. It is generally admitted that this is so as regards our general hospitals, and, in my opinion, the same considerations apply to our hospitals and asylums for the insane.

The present position of affairs is peculiar—the sick poor are nursed by educated women, often of gentle birth, whilst insane gentlewomen are frequently nursed by those not far removed in culture from their maid-servants. Our efforts in the Retreat have been directed to remove this paradox. In the nursing world to take up asylum work is generally looked upon as taking a step downhill professionally, a prejudice not without some justification in the past. In the future, in my opinion, the nursing of the insane will become a branch of the profession in no way behind other branches. It will become a vocation for cultured women, wherein they will find ample scope for the exercise of their powers.

Such women will not merely become more competent and the better able to render intelligent obedience than often obtains at present, but the wants of our patients will be more readily anticipated, and their mental outlook and peculiar difficulties will be better understood.

In these remarks I do not for one moment wish to suggest that women who have had few educational advantages may not make good nurses, or that amongst the less educated classes we do not find as much kindness of heart as exists higher in the social scale. We all know that virtue is not confined to one class. But I venture to think that, if the

nursing in asylums is left as it has been, we practically exclude the class of women most likely to help us in our work.

It is found wise in general hospitals not to be too strict in insisting that gentlewomen only need apply, and I believe, that in the best of them, women of very different social position are working side by side. This should be the case in our institutions for the insane. We should provide an opening for any conscientious woman with refined instincts and the necessary qualities of intelligence, tact, and patience.

In order to obtain the services of the women I have in view, it is, in the first place, necessary to provide the nurses with greater privacy and comfort when free from duty than generally obtains at present. To this end the Committee of the Retreat built, in 1898, a nurses' home, the first, I believe, in any institution for private patients in Great Britain. At the same time the hours on duty at the Retreat have been reduced, the holidays lengthened, and it has been found wise to give each nurse on every full working day an hour free from duty in addition to meal-times. The salaries of the senior nurses have been raised, but the probationers receive rather less than formerly. No doubt in course of time, when the value of a sound training is better recognised than at present, the junior nurses will be glad to come at a much reduced salary. But at the same time the more responsible posts must be much better paid than is now usual.

With regard to the organisation of the staff, I find myself at variance with Dr. Robertson, who, in his excellent paper in the April number of the *Journal of Mental Science* on "Hospital Ideals in the Care of the Insane," advocates the introduction of a number of assistant matrons, each of whom superintends the work of a ward or group of wards. These are in his scheme hospital nurses, often without any asylum experience, and are additional members of the staff. Dr. Robertson claims that they do not interfere with position and promotion of the other nurses, though they are superior officers and receive a higher salary. The wiser course appears to me to follow the organisation of a general hospital. The head of the nursing staff is the matron, who, in a large institution, will doubtless require one or possibly more assistants, to whom she will assign certain duties, such as oversight of linen, clothing, and the service of meals. The assistant matron, however, does

not form an intermediate officer between the nurses and the matron, and has no special territorial sway, but rather constitutes an extension of the matron's faculties where one person cannot possibly undertake all the duties of the position.

Each ward is under the charge of a thoroughly qualified nurse, who, at the Retreat, following the practice of general hospitals, is called the Ward Sister. She receives the instructions of the medical officers as to the treatment of her patients, and generally is mistress of the ward. She should be well educated, and experienced in both hospital and mental work. The sisters at the Retreat form a class by themselves, they have meals together, and possess several privileges that the nurses do not enjoy.

The nurses are divided into staff nurses, who hold the Association certificate, and probationers. The sisters, staff nurses, and probationers wear distinctive uniforms.

There is in this organisation little difference from that usual in most institutions for the insane, the chief distinction being that the ward sister under this arrangement becomes a more important officer than the charge-nurse was apt to be, there is more decentralisation of authority, and she bears a title which emphasises the fact that she holds a distinct and important place upon a hospital staff.

In many institutions where private patients are received ladies' companions are employed to assist in the occupations of the patients. Though for special reasons we have two companions still in the Retreat, I consider it a necessary corollary to the introduction of well-educated women as nurses and probationers, that no untrained officer be placed over them in any capacity, to do the more agreeable part of the duties and escape the more unpleasant.

It is also essential that a thoroughly good training be given the staff. I look upon the engagement of a probationer in the light of a contract with two sides to it ; she undertakes to give her best services and to take every pains to learn how to become an efficient nurse, and the Committee of the institution undertakes to give her every reasonable opportunity of doing so. But the usual terms on which nurses are engaged are much the same as those for domestic servants, and no undertaking is given to provide any training whatever. If a person

is engaged by the month, the engagement gives no suggestion of a long course of instruction and training for the acquisition of a profession. It, moreover, has the hurtful effect of the nurse feeling free to leave directly she thinks she knows her work, a result that has too frequently followed success in obtaining the Association certificate.

I therefore strongly recommend the adoption of the hospital system of receiving probationers for a definite term of years. At the Retreat, after a period of trial for two months, the nurses enter for a four years' engagement. The agreement that the nurses sign after the time of trial has elapsed may not be very binding in the legal sense, and it is not intended to compel a nurse to stay who does not want to, for such an one would be of little use; but it constitutes a clear understanding quite sufficient for honourable persons. The Committee reserve the right to terminate the engagement at any time, and if a nurse wishes to be relieved before the end of the period agreed upon she must apply to the Committee, who will, no doubt, liberate her if sufficient reason be assigned.

On entering, the nurse is provided with a statement setting forth the conditions of service, the character of the training, and is informed that she is expected to enter for the Association examination at the end of her second year, and at the end of the third year for the examination for the Special Certificate of Training at the Retreat.

In deciding to engage nurses for such a long period as four years, twice as long as is thought necessary to qualify for the certificate of proficiency given by this Association, I was influenced by the following considerations:

1. I satisfied myself that two years was too short a time to turn an untrained woman into a qualified nurse, and that in reality four years' experience of mental diseases was necessary.

2. A four years' engagement would tend to secure the services of a greater number of experienced nurses in the institution, by preventing the resignation of those who had obtained the Association certificate.

3. I considered it probable that a four years' engagement, as is commonly the case in good general hospitals, would in reality be more attractive than a shorter period to the kind of woman whose services I wanted to secure.

It should, however, be explained that it is understood that

the training, so far as lectures and classes and examinations are concerned, is complete in three years, and that during the fourth year the nurse either takes up a position of greater responsibility in the wards or enters the private nursing department, where she will gain self-reliance and additional experience. In the latter case she receives a commission upon her earnings in addition to her salary.

The teaching that the nurse receives at the Retreat during the first two years corresponds to that laid down in the *Hand-book*. If an average woman is to understand what is there set forth she will require to work hard through two winter sessions. In the course of the forty lectures and demonstrations given by the medical officers of the Retreat in these two years every effort is made to avoid theoretical subjects, and to deal with practical matters. The matron and ward sisters also give the nurses instruction in the wards.

In considering this one cannot but realise that the real training the nurse receives depends upon the discipline in the wards, the cultivation of orderly habits, of obedience, and the development of powers of self-control and patience; and the question naturally arises in respect to the dogmatic teaching upon the outlines of anatomy and physiology, *cui bono*? The answer appears to me to be precisely the same as that we give the medical student, who asks what is the good of learning the anatomy of the amphioxus or the development of the chick.

It is evident that much that we have learnt as students, and much we teach the nurses, is purely educational, and has often no direct utility. It affords part of the equipment which enables us to perform our work intelligently. A knowledge of the composition of the atmosphere may not be needful to enable a nurse to ventilate a room properly, yet acquaintance with this makes the simple duty more interesting, and may add to her influence over a patient who objects, as she is no longer ignorantly carrying out an instruction.

One difference between the nursing of the sick and the nursing of the insane is that, in the latter case, many more faculties are called into play. Thus social gifts and accomplishments, as they are called, fill an important place in asylum life, and they should be assiduously cultivated. Moreover the medical treatment covers a wider field, and there are a number

of special methods of treatment of value in certain cases that rarely are used in general hospitals. These two facts seem to me to make it clear that we should train our own nurses, and not look to general hospitals for assistance. So far we have been compelled to do this, as there were so few well-trained and well-educated women, with asylum experience, available for responsible posts, but I trust this will not long be the case.

Among the special methods of treatment I may mention open-air treatment as for phthisis, massage and various forms of medical gymnastics, the use of special dietaries, Turkish and electric baths ; and in all these we require the assistance of intelligent nurses.

Whilst one can hardly expect any nurse to be familiar with all these, and the many other "cures" that may be thought specific in mental cases, it has been decided at the Retreat to give systematic instruction in medical gymnastics and massage to the nurses in their third year after they have obtained the Association certificate.

In America this is a recognised method of treatment, and considered of great therapeutic value. So far as I have tried it, I can confirm this. In America and on the Continent many asylums have well-equipped gymnasia which, I fear, are not found at present in England. I further think it would be a wise departure to require all the junior attendants and nurses to take a regular course of Swedish drill. Its value does not depend upon the muscle it may develop, or on the hygienic results as regards health, so much as upon the training of the attention. It is an essential part of the Swedish system that prompt obedience to commands be given, which cultivates an alertness of mind of much educational value. Arrangements have already been made to hold classes of this kind at the Retreat, under the care of qualified instructors, for men and women respectively, in addition to the classes in medical gymnastics and massage which the senior nurses attend.

A class in invalid cooking has also been held for the instruction of the senior nurses, and the medical officers have given them an additional short course of lectures on the nursing of mental and nervous diseases.

Dr. Robertson, in the paper I have already mentioned, suggested that nurses upon the insane should first train in general hospitals, and afterwards take up their special branch

of work. Life is too short for this. A course of training in one of the larger hospitals occupies four years, and includes much surgical work not necessary in an asylum. We can hardly expect all our nurses to devote six years to their training. It seems to me much wiser for the probationer to commence amongst the insane, and find out early whether she possesses the needful qualities. It must be remembered that the duties in a general hospital are entirely unlike those in an asylum; the discipline is quite different, and by no means necessarily assists the nurse in learning how to manage properly the insane. On the contrary, on undertaking mental work the hospital nurse has to unlearn not a little. It is evident, however, that the training undergone in hospital, on the whole, is helpful, and should materially shorten the time necessary to obtain proficiency in mental nursing.

In order to cope with the bodily disorders that so frequently accompany mental disease, it is certainly desirable that nurses upon the insane should have some hospital experience, but it is not easy to secure this without incurring considerable expense. I hope, however, that some co-operation between the hospitals for the sick and for the insane will be possible before long, so that nurses intending to undertake mental work may obtain on easy terms a year's experience in a large hospital or infirmary.

But it must, in the first place, be thoroughly understood that a nurse trained as I have suggested is not qualified to undertake the nursing of bodily illness unless she has taken a full course of hospital training; nor, on the other hand, must the fully trained hospital nurse be considered qualified for mental work unless she has undergone an adequate course of training in a well-equipped asylum.

If there is to be co-operation between the two branches of the nursing profession, neither branch must assume proficiency without proper justification.

I make no claim for originality as regards the proposals in this paper; many of them have been practised in America, and many are but an adaptation of hospital methods to asylum life. I can only say that the scheme sketched out has, up to the present, been attended with success. It has largely attained the end I had in view, *viz.*, the introduction of a greater number of well-educated women upon the nursing staff of the Retreat,

and this has, in my opinion, proved to be an unmixed benefit to the patients under my care.

DISCUSSION

At the Meeting of the Northern and Midland Division, October 8th, 1902.

The CHAIRMAN (Dr. Pope) expressed his admiration of the work which Dr. Bedford Pierce had accomplished in securing the services of educated women and in training them as mental nurses. He fully recognised the value of such a procedure, but feared that at present it would not be practicable to carry it out to any extent in county and borough asylums.

Dr. McDOWALL said it was a mistake to make people believe that the women who would take charge of them were gentlewomen when they were not. In a very well known private asylum it was found that women of distinguished birth and education stood the restraints necessary in mental treatment more readily from persons who were socially very much their inferiors than from women approaching their own position in life; and he knew this, that in a public asylum where it was a boast that the staff consisted of gentlewomen they were not gentlewomen at all—they were of the poorer professional and commercial class.

Dr. HITCHCOCK said he should be very glad indeed to try some of the proposals mentioned by Dr. Pierce, but he did not see where the money was to come from.

Dr. MILLER said there was a question in connection with the training of nurses which it would be interesting to the branch to know, and that was the number of asylum attendants who held the qualifications of the Association. He had received a letter from a Continental physician asking for some information. He found there were some 2200 trained attendants and nurses in the rate-supported institutions in this country. He was now sending out circulars inquiring as to the numbers in licensed houses acknowledged as training institutions. There were also a great many who, having received the training necessary to qualify them, gave up asylum work and joined some nursing institution. He did not wish to throw any cold water on Dr. Pierce's enterprise in this matter, but were he in Dr. Pierce's shoes he should dread the completion of the term of four years, when these people could leave and join some more lucrative institution. Of course we have to face the monetary question in rate-paying asylums. We could never hope to pay the salary which Dr. Pierce now pays his people. It would be outside the capability of a rate-supported institution.

Dr. PIERCE explained that only the ward sisters received £30 to £40. The salaries of the nurses were £16 for the first year, £18 for the second, £22 for the third, and £25 for the fourth. The salaries must be higher than now usually obtains, if we are to secure the right type of women on the nursing staff.

Dr. HEDLEY said, on behalf of Dr. Walker, Dr. Townsend, and himself, that they had been very much gratified by the invitation they received to meet a branch of the profession which he, at any rate, had not had the advantage hitherto of having much communion with. He had been very much interested in the discussion on the paper, and he could quite see what energy and enterprise and enthusiasm there was among that branch of the profession, whose task he was sure was exceedingly difficult and, if he might add, very unpleasant to perform. He hoped they would accept their very best thanks for their very kind reception.

Dr. MIDDLEMASS said the class they drew from in the county and borough asylums was not the class he should like to see. He agreed with Dr. Pierce that there was room for very considerable improvement. He wished they could bring the arrangements in asylums into harmony with those in hospitals. He did not think it mattered whether they called the women gentlewomen or anything else. What they wanted was women with a certain mind and intelligence, and, above all, a sense of duty.

Dr. BEDFORD PIERCE, replying on the discussion, said Dr. Miller had asked about the women going away to private nursing institutions. Of course a certain number did go away. There were, however, two good reasons why a nurse would prefer to be associated with a recognised institution rather than with a private association which

might be devoid of any soul, and whose only object was to make money. One reason was that the nurses knew they had the support of the institution behind them. Whenever they were placed in any unfortunate position, or their work was unduly hard or more severe than was reasonable, they knew that the authorities of the institution would support them—would withdraw them, or see that things were put right. An institution could make better conditions of service with employers than an association. Another thing, which applied to men, and which was the real reason why men stayed with them for so many years, was that the trustworthy attendant could marry and have a home of his own; and to such, private nursing and constant travelling about were naturally distasteful. He thanked the members for the kind way in which they had listened to and criticised the paper. As to whether the nurses would undertake to stay in a county asylum for three or four years, he thought it very likely that if Dr. Middlemass were to try the experiment he would have little difficulty in carrying it through satisfactorily.

Case-taking in Large Asylums. By DANIEL F.
RAMBAUT, M.D.

IN the very large asylums, where the insane are counted by thousands, there will always be a difficulty in keeping an accurate record of the mental and physical condition of the patients, and the changes which occur from week to week in these conditions. Unless some method is adopted in case-taking many records will be omitted and many interesting and important changes will be overlooked.

The assistant medical officer, who proceeds through the wards of an asylum with his note-book in his hand, will doubtless obtain much information of value, but those suffering from acute forms of insanity—the demonstrative, the importunate—will force themselves upon him, to the exclusion of the retiring, the tranquil, and the hard-working. Without some system in note-taking patients will be passed over—will, in fact, be never seen, except by the wide-angled, vague, routine official gaze.

Without a system by which each patient's state is thoroughly investigated at regular stated intervals, and by which notes are made immediately after each examination of a patient, our case-books are bound to become a mass of useless writing, from which no scientific fact can be obtained, which would give no data for a diagnosis or a prognosis, and are wholly valueless to the medical statistician.

I have seen case-books in which cases were written up by fifty at a sitting. Who is there who has not seen such notes

as, "No change," "He continues in the same mental and physical condition," "His condition remains unaltered"? I have even seen a case-book which contained a three-monthly record of a patient's mental and physical state for a period of one year after his death!

I shall try to explain in as few words as possible the method of case-taking employed in the Richmond Asylum, Dublin—a method which has worked with excellent results during the last five years.

In the first place, it is necessary to keep a small register of patients, which I call the "Register of First Year." In this book is entered merely the name and general asylum register number of each patient on the day of his admission. One page of this book contains the names of all the patients admitted during one month.

The following represents the month of May, 1902 :

May, 1902.

1. John Noon, 20,290.
2. ~~Timothy Poole, 20,291.*~~
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
10. ~~William Smith, 20,294.†~~
11. ~~Thomas Kelly, 20,296.~~ Michael Ryan, 20,297.
- 12.
13. Thomas Toole, 20,299.
14. ~~William Callan, 20,301.~~ William Hay, 20,302.
15. Patrick Murphy, 20,303.
- 16.
17. Edward Barry, 20,305. ~~Joseph Troy, 20,304.~~
18. Michael Hayden, 20,308. ~~William Brown, 20,307.~~
- 19.
- 20.
- 21.

* Those names through which a line is drawn are discharged or dead.

† The Register numbers are not consecutive, because the list only includes males.

22.

23. John Byrne, 20,312.

24. ~~Charles O'Neill, 20,313.~~

25.

26.

27.

28.

29. Thomas Cook, 20,318. Peter Mullen, 20,319.

30. ~~Edward Bird, 20,320.~~31. Henry Morris, 20,323. Michael Doyle, 20,324. ~~Edward Jones, 20,328.~~

From this register one can rapidly find, on any given day, the names of those patients who were admitted on the day before the given day, on the same day of the week seven days before, fourteen days before, a month before, two months before, and three, four, six, nine, and twelve months before.

If one makes a list of the names so found, and makes a similar list on each succeeding day, one can be certain that each patient who has been admitted during the past year is on the list for examination and note-taking on the day after his admission, one week after admission, two weeks after admission, one month after admission, two, three, four, six, nine, and twelve months after admission.

In the second place, it is necessary to keep a second small book, which I call the "Chronic Register." In this book one page is allotted to each day of the year of all previous years, and on each day of the year are entered all the cases which were admitted to the asylum on that day of any previous year.

The following represents the entries for one day of the year of any previous year :

May 23rd.

James Smith (15,555). 1891.

~~Thomas Jones (15,557). 1891.*~~

Joseph Shane (16,966). 1894.

~~Bernard Robinson (16,998). 1894.~~

Patrick J. Stowe (17,889). 1896.

Adam Bede (18,240). 1897.

Sherlock Holmes (19,370). 1889.

* The name through which a line is drawn is that of a patient discharged or dead.

For instance, under the date May 23rd you will have the names of all the patients at present resident in the asylum who were admitted on May 23rd of any previous year. In making the list for examination for any given day, besides adding the names of any patients admitted on that day twelve months ago, it is necessary to transfer these names from the "Register of First Year" to the "Chronic Register."

To complete the list for examination for any day, say May 23rd, 1902, one takes from the "Chronic Register" the names found on the page allotted to May 23rd for all years, and on the pages allotted to February 23rd, November 23rd, and August 23rd of all previous years. In this way all chronic patients will appear on the list for examination every three months.

On the 30th April, June, September, and November the list for examination will always be a little larger, because the 30th and 31st of other months must on such days be taken as one day. And for a similar reason an enlargement of list must occur on the last day of February; but this increased list occurs on only five days in the year, and it is compensated for by decreased lists on the last day of the remaining seven months, which contain thirty-one days.

As the result, then, of making notes on the patients who are on the list for each day, obtained as I have described above, one knows that each patient has had a note made of him—

1 day	after	admission,	
1 week	"	"	
2 weeks	"	"	
1 month	"	"	
2 months	"	"	
3	"	"	"
4	"	"	"
6	"	"	"
9	"	"	"
12	"	"	"

and every three months as long as he remains in the asylum.

Each asylum can easily vary the intervals between each note, and thus increase or decrease the number of reports on each patient. The number of names on the list will depend on the number of the patients and the length of the intervals.

In an asylum with 1000 patients the number on the list will vary between ten and twenty.

Any clerk, head attendant, or intelligent hall-porter can easily keep these two small registers, entering each day the names of the patients admitted, crossing out each day the names of those discharged or dead, and transferring each day names from the "First Year Register" to the "Chronic Register." The correction of the two registers and the making of the list for note-taking involve only a few minutes' work each day.

The list obtained, as I have attempted to describe above, is made out for, say, May 23rd, on the afternoon of May 22nd, and is placed in the attendants' dining hall, so that each charge attendant can carefully investigate the history of any of his patients, who may be on the list, during the period which has elapsed since his patients were last entered on the list.

Each charge attendant then writes a report on any patient in his ward who may be on the list, and in this report he enters the dates of each transfer of a patient from ward to ward, and the reason of the transfer, and he states any special events which may have occurred, such as accidents, attempts to escape, refusals of food, seizures and their number by night and by day.

He also gives a short description of the patient's conduct in the ward, of any peculiar habits, and mentions any prominent delusion or hallucination.

He also mentions whether the patient is receiving medicine or extra diet, and adds a note about appetite and sleep.

He reports in what manner the patient is employed during the day, and having weighed the patient he enters the weight in the report on patient.

The charge attendant enters his report on a printed form, and returns it to the office before eight o'clock in the morning.

In making his report on the patient it is necessary for the charge attendant to review each case in turn, and much valuable information is often obtained by the charge attendant which might otherwise have been lost.

Report on patient for period since last examination.

NAME,	REG. NO.	WARD.
1. Divisions in which the patient has been Date and cause of transference		
2. State any special events :— Accident, escape, refusal of food, seizures, etc. Conduct in ward Peculiar habits Prominent delusions or hallucinations		
3. Medicine	4. Sleep	
5. Appetite	6. Extra diet	
7. Weight	8. Occupation	

*Charge attendant,**Date,*

In each ward any patient who may be on the day's list is brought before the medical officer when making the morning round, and they are afterwards brought to the office, where the case-books are kept, for further examination, both mental and physical.

A copy of the list for the day is made in a book for the convenience of the medical officers, and when the medical officer has entered the record of his examination in the case-book he places his initials opposite to the patient's name.

By this periodical examination disease in its incipient stage is often discovered, and patients are afforded an opportunity of having their complaints investigated and their wants attended to, and it in no way interferes with, or takes the place of, the frequent recording of sudden changes and other interesting phenomena observed in the acuter forms of insanity.

The details of such a scheme are necessarily obscure when described in writing, but when put into practice no difficulty presents itself.

DISCUSSION

At the Meeting of the Irish Division, May, 1902.

The CHAIRMAN (Dr. Oscar Woods), in inviting discussion on Dr. Rambaut's paper, said that one knows how easy it is to forget the details of cases, and how

desirable it is to have accurate notes made at definite times. He considered that if Dr. Rambaut's system proved to be easily worked, it would be a very great assistance.

Dr. NOLAN said that he had adopted this system, and that he found it easily worked and exceedingly useful. He regarded the training that it involved for the attendants as a most desirable feature.

Dr. CONOLLY NORMAN said that the form described by Dr. Rambaut had been devised by that gentleman, and had been in use in the Richmond Asylum since 1898. The speaker had formerly experienced the usual difficulties in having case-books kept systematically. In his asylum, as elsewhere, it not seldom used to occur that a chronic patient was lost sight of by the officer whose duty it was to make the notes. The speaker did not allow of notes made *post mortem* from memory or fancy and antedated, neither did he allow the note so dear to the official mind—"No change in this patient." So the case-books now and again presented a bald and barren appearance, and what was no doubt less serious from an official point of view, though in itself of some moment, took place—namely, certain patients were neglected. After much consultation and deliberation on the part of the medical staff, his assistant, Dr. Rambaut, hit upon the plan which was placed before them that day, which the speaker had immediately adopted. Since then no case is to be found in the asylum which has not been noted at the stated periods. Two things are required. The first is a statement of the patient's physical condition. This has frequently led to the detection of chronic diseases which under a less careful system might have escaped detection for long periods. As an example, a case may be mentioned of a tranquil dement who, after some sixteen years' residence in the asylum, was found on one of the periodic examinations to be suffering from early progressive muscular atrophy. Precisely when the disease began it was, of course, impossible to say, but it must have been between the dates of the ultimate and the penultimate examinations. The second matter insisted upon, even in the most "chronic" and "uninteresting" cases, is a definite statement of the mental symptoms found at the period of examination, and at the head of each page is a printed instruction that the note is not to consist of a diagnosis or an opinion, but of facts. Dr. Norman said: I wish to dwell for a moment upon this, because some years ago, when it was enacted in England that every patient should be re-certified every year, it was looked upon by a number of our colleagues as being an insulting and also a superfluous provision, and it was said that insane patients in an asylum no longer required to be certified. It has been found, I believe, to work very usefully, and it has insured that at least once a year in English asylums every patient shall be examined with the view of ascertaining whether he is insane or not, and that his mental symptoms shall be described in some detail. We have arrived at a similar result working from a different point of view, and I think it is a result that is very desirable. Another feature in our system is the note required to be made by the charge attendant of the ward where the patient lives. This note, on a printed form devised for the purpose, must be handed to the medical officer on the day when the patient's case is to be noted. Besides helping to ensure that nothing is forgotten, this procedure is useful by teaching the attendants what they as well as ourselves need to learn, *vis.*, that the "chronic" and "uninteresting" patients must be observed and noted; it keeps alive their interest in their cases; and, finally, from these attendants' notes very valuable information is often obtained.

Dr. MILLS said that the system was a most admirable one, and that the only barrier to its universal adoption would be the difficulty of securing the services of a clerk or hall porter who would be capable of keeping the registers.

Dr. DRAPES said that the system was excellent, and would tend to ensure the detection of the onset of an insidious disease. He, however, feared that in those districts where the people are comparatively illiterate it would be difficult to find attendants of sufficient education to make proper records.

The CHAIRMAN said that he would like to ask Dr. Rambaut how much time an assistant medical officer would take in writing up the notes on 400 cases; also whether there was any classification of the cases at the Richmond Asylum, *e. g.* into acute and chronic, so that one medical officer was responsible for the acute, and another for the chronic cases.

Dr. RAMBAUT, in replying, said: With regard to the first question as to the work of the hall porter or of the clerk, that only takes about three minutes

in the day; in the Richmond Asylum it is done by an intelligent hall porter, but if there was not an intelligent hall porter it could be done by the medical officer. I could make out the list for you now for any given day from these books in about three minutes. As regards keeping registers, it only means striking off those who die, and entering the admissions. I think chronic cases quite as important as the more acute forms of insanity. They may not need note-taking so often, but when notes are made they should be done with much care, and I think in that way locomotor ataxy, phthisis, and other diseases will be discovered very early, and also that cases of recovery will not be overlooked. Dr. Woods has asked how long would it take one medical officer in an asylum with 400 patients to write up the notes. It would take from two to two and a half hours. We have no very definite system of classification in the Richmond Asylum. Some of the wards belong to one medical officer and some to another, and hence each officer has a variety of cases. I thank you very much for the kind way in which you have received my paper.

The CHAIRMAN.—We are all very much indebted to Dr. Rambaut for the trouble that he has taken in bringing this matter forward, as it is very interesting and important.

The Treatment of Phthisis in Asylums by Urea and its Salts. By J. LOUGHEED BASKIN, L.R.C.P., L.R.C.S.Edin.,
Assistant Medical Officer, Devon County Asylum.

THERE has been a considerable amount of attention called to the subject of phthisis in asylums lately, and since the publication of the report of the Tuberculosis Committee the subject has appeared in a broader light. Although much is being and has been done for the prevention of phthisis by means of the Sanatorium movement, and the varieties of the technique of hygiene which are included in that treatment, yet there are still many aspects of the disease (both in the sane and insane) which require precise investigation, such as the variations in the composition of the secretions and excretions when the body is in the state of phthisical toxæmia; the relationship of the tuberculous toxæmia to other toxæmias, such as the influenzal (27), gouty, etc.; the accumulation of toxins, and its relations to recurrent forms of disease. The number of deaths from tubercle here during the past year we find to be ten; in 1900 it was nine, and 1899 it was fifteen, so that from a percentage of 1·3 in 1899 it has dropped to 0·85 in 1901. On examining the position of this asylum in the tables drawn up by the Tuberculosis Committee (1) we find it tenth in the asylums in England and Wales which are classified under Division 1, which asylums have a tubercular death-rate of from

0·5 to 2·2, the county asylum at Exminster having a percentage of 1·3. This compares favourably with other asylums, some in the Division 2 having a tubercular death-rate of 5·1 and 8 *per cent.* respectively.

On analysing the notes on the patients which suffered from phthisis in 1901 and in 1902 up to October 20th, we find that out of seven patients to whom I have administered the urea treatment, one died, two recovered, not only physically but mentally, and of those at present under treatment four show distinct signs of getting better, if we may include one case which is that of a former asylum attendant, whose condition, looked on as hopeless a year ago, has since shown improvement.

The patient J. C— made the most successful recovery considering the severity of his illness of any of those treated with urea. He had been in bed for ten weeks suffering from advanced tuberculous disease in each lung, when a large abscess formed in the left interscapular region. His temperature ranged from 101° F. to 103° F. His sputum was crowded with the bacilli of tubercle, and he was reduced to 85 lbs. in weight. In July, 1901, this abscess was opened, drained, and he was put on the urea treatment, 20 grains thrice daily to begin with. From 85 lbs. in weight in July he rose to 90 lbs. in August, and in September he was 102 lbs. in weight, not only recovered in his bodily condition but in his mental, and he was discharged from the asylum in October. Mentally this patient showed obstinacy, accompanied with delusions of being poisoned from time to time throughout his illness (28, 30).

The patient G. A—, one who recovered physically and mentally and was discharged, showed signs of tubercular disease of the left apex in January, 1901, when he weighed 150 lbs., his temperature being 100·2° F. in the evenings. He was ordered urea in 20-grain doses, and in February his weight rose to 155 lbs. On March 17th he was taking 180 grains of urea daily, and in April he was practically cured, and on May 6th was discharged recovered mentally. This patient showed the *spes phthisica* continually throughout his illness, and the mental variability of the insanity of phthisis (28). His urine contained urea varying from 4 to 5 grains per ounce; this deficiency lasted for three months.

The patient E. T—, admitted with pulmonary emphysema,
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developed phthisis; the right apex gave evidence of disease. She was, on September 12th, 1902, in bed, her temperature being 100° F., and was ordered urea in 20-grain doses thrice daily. On September 16th she asked for more food, her constant refusal of which, and suspicions of poison (28), being the chief mental symptoms up to this time. On September 29th she had gained 12 lbs. in weight. On October 7th her weight had still improved, the physical signs of disease in the lungs were much altered for the better, and she was allowed up on October 14th. She now goes daily to sit in a sunny spot on the veranda of the ward away from the other patients. During the last week she has been taking uric acid, in which time her weight has not increased, nor was any change seen in the percentage of urea in the urine, which has remained at from two to three grains in the ounce for weeks. She now constantly inquires for food, looks brighter, and states she is much better.

The patient M. S— on September 17th, 1902, weighed 77 lbs.; her lungs gave evidence of advanced tubercular disease; her temperature in the evening reached 99° F. Urea was administered in doses of 20 grains thrice daily; she had increased 1 lb. in weight on September 23rd, and on October 14th she maintained her increase and general physical improvement. Mentally she showed signs of increased activity (29) by chattering louder and more incoherently than formerly. The percentage of urea in this case did not rise above three grains to the ounce at any time it was examined, and on October 6th it fell to two grains in the ounce.

Another patient, L—, when first taken in hand had been reduced from 113 lbs., his normal weight, to 102 lbs.; both lungs were diseased, and a cavity was diagnosed at the left apex; his temperature ranged from 101° F. in morning to 102° F. in evening, and his sputum contained numerous bacilli of tubercle grouped in pairs. He was put on the urea treatment in the middle of October, 1901, when his weight was only 102 lbs. The following dates give his increase in weight :

November 2, 1901, 102 lbs.

„ 12, „ 105 „

„ 18, „ 107 „

„ 27, „ 108 „

December 4, „ 110 „

December 11, 1901, 108 lbs.

" 16, " 108 "

" 23, " 113 "

" 30, " 113 "

On December 5th an abscess which had formed in the left groin was opened, and over half an ounce of pus removed.

In January, 1902, he contracted influenza and lost ground, sinking to 110½ lbs. in weight; since then his weight has fluctuated, but in July it went up to 113 lbs., and his lungs, which had been extensively diseased in November, were so much improved that he was able to go on a visit to his friends and undertake a railway journey. The percentage of urea in this patient's urine was at times as low as three grains in the ounce. The percentage of phosphoric acid in his urine on analysis showed an increase from the normal 16 *per cent.* to 18 *per cent.* (40), probably due to his treatment with the phosphate of urea.

J. A—, admitted as a patient in 1893, when his lungs were unhealthy and he suffered from asthma. In September, 1902, he developed phthisis, and had to give up his work as shoemaker, at which he had always toiled unsparingly. His sputum contained numerous bacilli of tuberculosis, and his urine showed a low percentage of urea, on one occasion being as low in quantity as three grains in the ounce. The phosphoric acid in his urine showed on analysis a reduction to 10 *per cent.* (26, 40). For the latter reason the phosphate of urea was administered, 30 grains thrice daily to begin with. He has put on 6 lbs. in weight during the last three weeks. His cough is less hacking, and he now seldom expectorates. He sits in the open air for many hours each day, and his temperature last time it was taken in the evening was 98·8° F. His appetite has much improved, and though mentally he remains much deluded, he has become very cheerful and optimistic.

Whilst the tissues are being built up by well-prepared and suitable articles of diet, and the blood enriched by medicinal aids, such as urea, it is important not to neglect some other points of treatment, which may be looked upon also as more or less prophylactic.

1. The patient must have pure air. This is arranged for by due regard to overcrowding and ventilation; the more recent patients here have been isolated as far as possible; one lives

practically the whole of the day in the open air, and two others spend many hours each day on a balcony where they are surrounded by fresh air apart from the other patients.

2. A bracing atmosphere is a great desideratum in the treatment of phthisis. The cold sponging carried out here in the mornings on patients acts as a tonic, and partially makes up for any relaxing effects of the atmosphere. Dr. Arthur Latham, in his address to the Hunterian Society on August 16th (37), refers to the beneficial influence of cold, and quotes an essay of George Bodington, who wrote, "Cold is never too intense for a consumptive patient."

3. It is very difficult to get insane patients suffering from phthisis to take exercise; this is one of their characteristics referred to by Clouston in his work on *Mental Diseases* (25).

The patient in the incipient stage should have gentle exercise such as walking, and, if possible, "dumb-bell exercise," as suggested by Dr. Harper, but he must avoid anything like excess, and, as advised by Niemeyer (2) in his *Practice of Medicine*, vol. i, "he must avoid great efforts in running and dancing." This suggestion is particularly applicable in the treatment of maniacal and excitable patients suffering from phthisis.

4. With regard to the dryness of the air: nothing can be done to alter the condition of air moisture out of doors, but when mist or dampness prevails, or rain is falling, the patients should remain indoors. This point is one of the strong factors in the climatic treatment of phthisis. The relation of the wet winds to the elevation of the phthisical death-rate in our own county is well shown by Dr. Gordon in the *Lancet* of June 15th, 1901, in which he refers to the low death-rate in the parishes of Gidleigh, Chagford, and Drewsteignton, where the "collective mortality from phthisis during the last ten years has been 0·7 per thousand per annum." These parishes are sheltered by the heights of Dartmoor from the prevalent wet winds; "the west wind and south-west wind have practically no access to them."

The most sheltered rural district in Devon as regards west and south-west winds is the Axminster district, and it has the lowest death-rate from phthisis. In the rural districts of Barnstaple, of Newton Abbot, and St. Thomas we find the same relationship between the wet winds and phthisis.

5. The floors especially require attention, as it is here by spitting, and the action of gravity on small particles of matter, *débris* accumulates. It is not enough merely to wash the floor or to polish it. By the first you only reduce the numbers of bacilli on the floor, and by the second you rub what are left more intimately into the interstices and crevices of the wood. In the dormitories on the male side in this institution floors are first scrubbed with an antiseptic soap and water, then a solution of carbolic acid is applied, of the strength mentioned in Muir and Ritchie's *Bacteriology* calculated to kill the *Bacillus tuberculosis* in less than sixty seconds (22); the quantity used is one gallon to the ten square feet. The floor is then polished with Ronuk, a preparation of wax of a healthy terebinthine odour.

Dr. Byrom Bramwell, in his late articles in the *Lancet* dealing with "Prevention of Phthisis," states, "The rooms in which phthisical patients live should be kept scrupulously clean. No dust should be allowed to accumulate in them; the floors, walls, etc., should, from time to time, be rubbed over with a damp cloth. We have seen that the inhalation of dust tends to produce in the respiratory tract catarrhal and other conditions which form a suitable nidus for the development of the tubercle bacillus, and that the inhalation of dust which contains living tubercle bacilli or their spores is the chief means by which the tubercle bacillus is conveyed from one human being to another." This is another of his precautionary measures: "If a phthisical patient should cough into the face of a healthy person, his nurse, or medical attendant, the healthy person should immediately blow his nose so far as to clear out his nostrils, and rinse out the mouth and throat with some disinfecting solution" (38). All discharges from tuberculous cases (discharges from diseased bones, joints, glands, etc.) should be treated in the same way as the sputum, *i.e.* immediately disinfected or destroyed.

In order to understand the *rationale* of the "Urea Treatment," it is necessary to briefly consider some facts relating to urea.

Urea is the diamid of CO_2 , and is an isomer of ammonium cyanate. It was first prepared synthetically in 1828 by Wöhler, and was the first organic substance prepared synthetically by chemists (16). It can be made in a variety of

ways, as described in works on organic chemistry (31, 32, 33). It can be easily prepared from human urine, and the dog's urine is specially suited for this purpose, on account of the large urea excretion which occurs in this flesh-eating mammal. For the purpose of administration to man, it is prepared synthetically from pure materials, and not derived from any excretory source (4).

If we study the *comparative physiology of urea*, we find that it is generally regarded as the chief end product of proteid metabolism in mammals, and that further down the animal scale it finds its homologue in uric acid.

This acid is excreted in such small quantities from the human being that one authority stated that it may be regarded as a "vestigial phenomenon connoting the evolution of the mammal from an ancestor which eliminated its nitrogen as uric acid" (15), and that the "residuum of uric acid in mammalian urine may be something in the nature of a vestigial feature, something analogous to the vermiform appendix or the ductus arteriosus" (15). "The graminivorous birds excrete uric acid and no urea; on the other hand, the Carnivora—lions, tigers, etc.—a quantity of urea, but very little uric acid" (Luff, 5). Sir William Roberts, comparing the functions of the kidneys of birds and serpents with those of mammals, considers that an immense functional evolution has taken place in the mammalian kidney, and that the evolution of mammalian urine has probably turned mainly on the point that the mammalian plan required that the excretion should be voided, not in the solid or semi-solid form, but as a watery solution. This modification would require the discarding of the sparingly soluble uric acid as a medium for the elimination of nitrogen, and the substitution of a nitrogenous substance readily soluble in water, such as urea. He considers it possible that the reason why this substitution has not been completely effected is that, in that particular, the mammalian type has not yet reached its ideal perfection, and that the residuum of uric acid in mammalian urine may be something in the nature of a vestigial feature.

Let us briefly consider the *rôle of urea in the body*. The ingestion of proteids, whether as meat, eggs, or cheese, etc., is always followed in health by an increase of urea in the urinary excretion in such a manner that the urea is increased, after a proteid meal, for five or six hours, until it reaches a maximum

Meantime it is maintained in the blood at a fairly uniform standard, 1 in 3000, and in chyle 2 in 1000 (Landois and Stirling). In the renal vein it is half as much as in the renal artery (Picard), according to Sir Alfred Garrod one third (14). It is also found in liver, lymph-glands, spleen, lungs, brain, eye, bile, saliva, and amniotic fluid. Moreover "it is always present in the blood of the mammalia, including man" (5).

It is found in the urine in the average proportion of 30 grammes, or from 460 to 500 grains, or a little over an ounce, in the twenty-four hours ; that is about 2 *per cent*.

The following facts throw light on its origin from products of proteid digestion.

When fully decomposed, proteids yield, as their final products, ammonia and amido acids. Cheese, when it decomposes, breaks up into albuminate of sodium, leucin, and tyrosin ; in fact, the latter word is derived from the Greek *turós*, meaning cheese.

The peptone resulting from digested albumin is further decomposed in the tryptic digestion into leucin and tyrosin. Gelatin, which is an albuminoid, and easily obtained from connective tissue by boiling water, when treated with sulphuric acid yields ammonia, leucin, and glycocine.

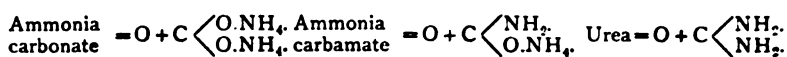
Lysatinine, a product of tryptic digestion of proteids, when examined is found to consist of the two hexone bases lysine and arginine ; and urea can easily be obtained from the silver salt of arginine by boiling it with barium carbonate (16).

When leucin or glycocine is introduced into the bowel, urea is increased in the urine ; moreover in acute yellow atrophy of the liver the urea is much diminished, and its place is taken by leucin, tyrosin (8), and ammonia (23).

In the Goulstonian Lectures, 1897, we read : "Glycocine is probably one of the antecedents of urea, for in man glycocholic acid, a compound of glycocine and cholic acid, passes in the bile into the intestine, and having served its purpose, and its constituents having been set free, the glycocine, together with the other amido bodies, passes in the portal blood to the liver, and probably in the hepatic cells is converted into urea."

Ammonia, when administered to man, is excreted as urea (34, 35); and Schröder's experiments demonstrate that carbonate of ammonium is an immediate precursor of urea, and Nencki

obtained similar results with ammonium carbamate, which is the carbonate of ammonium *minus* one molecule of water (16) :



There is no doubt that a certain amount of nitrogen must come from muscular metabolism, for we know that on the day following great muscular exertion there is an increase of urea in the renal excretion ; in muscle, creatine is found in fairly large quantities, and creatine splits into urea and sarcosin on treatment with baryta water. Moreover sarcosin + cyanamide = creatine, and cyanamide + water = urea (16). It is also known that sarcolactic acid is the result of muscular metabolism, and is found in the blood in small quantities. Some hold the view that lactate of ammonia is the form in which part of the muscular metabolic products reach the liver, where it is further broken up into urea. In birds, when the liver is excluded from the circulation, ammonia and lactic acid are found in the excreta replacing the normal uric acid (17).

From these facts we see that ammonia, leucin, or glycocine is always amongst the ultimate products of proteid digestion, and as ingestion of proteid increases the urea excreted, it is evident that among these is its immediate precursor.

That it is a body of great importance in the human economy is clear from its universal distribution in the tissues, and its intimate chemical relationship to them and their metabolic products, its presence in the blood of man and mammals, its formation from proteid products of digestion as far back in the scale of glands as the liver, and its normal percentage in the urine of the body ; and that its beneficial action has been marked where administered in phthisis is shown in the cases previously mentioned.

The great deficiency of urea in phthisical urine, especially when the disease has made progress and the patient is rapidly wasting away, is so marked that the idea of administering urea immediately suggests itself. Now, in what conditions do we find the urea diminished in the urinary excretion ?

1. Where there is diminution in the ingestion of proteid and every degree of the same leading up to starvation.

2. In toxæmias, such as phthisis, acute yellow atrophy of the liver, phosphorous poisoning, etc.

3. In disease of the renal excreting organ, such as chronic interstitial nephritis.

We are not likely to meet cases of starvation in practice, and in the recorded case of the fasting man Cetti, whose ten-day fast has been studied (8) by careful observers, we learn that the urea excreted fell in quantity from 29 to 20 grms.

We are, however, likely to meet with patients whose intake of nitrogenous food is very small, and the baneful effects of such a diet are shown in the high percentage of deaths from phthisis in races who are small meat eaters, such as the negro. "The best specimens of scrofulous glands are to be found in the open glens and seaside villages around the coast of Ireland and in the poor parts of Scotland, where the people live on a diet deficient in nitrogen" (6)—potatoes, porridge, milk, with an occasional meal of fish or fat bacon. "The cow is an interesting animal from this point of view, as it is the animal more often attacked with tuberculosis than any other. Here we have a large amount of energy expended in procuring a sufficiency of nitrogen from herbs, and a large daily loss in proportion, in the casein of milk. This process of extraction of nitrogen goes on far beyond the ordinary period of lactation" (19). And the most frequent cases of tuberculosis amongst the animals confined in the Zoological Gardens occur in those whose diet consists of farinaceous material or vegetables. This fact is proved by the *post-mortem* examinations held there (18). The importance of a highly nitrogenous diet is being more recognised every day, and the method termed zomotherapy, of giving raw meat and meat plasma in phthisical cases, as adopted by MM. Richet and J. Hericourt, has given the most satisfactory results (9). It may be urged that in the proteid food administered there should be enough urea to bring about a cure; if normally assimilated and the products of digestion normally dealt with in the proteolytic function of the liver, probably so; but in the toxæmia of phthisis, the appetite, digestive and glandular activities are impaired, usually to such an extent that the mere giving of proteid food is unavailing. In such cases the administration of urea—the ultimate representative of those varied proteid substances taken as food, a ready-made preparation of known strength and character—removes a burden of work from the failing organs.

In gout and diabetes mellitus, urea is excreted in larger

quantities than in health. In the latter disease, in addition to glycosuria, there is a great drain of nitrogenous matter from the system in the form of urea and ammonia; phosphoric acid is also increased in the urine. This abnormal loss leaves the system depleted of its physiological resistive power; hence the frequency of phthisis as a complication in the diabetic.

If we consider in reference to this the fact that the white mouse, which is immune to tubercle, can be made to entirely lose its immunity by hypodermically injecting dextrose (6), we see an analogous condition, *viz.*, the large amount of saccharine matter in the blood and the susceptibility to phthisis. In gout, on the other hand, though there is an increase of urea and urates in the urine, it occurs because there is an excess of these matters in the system, which, instead of being depleted of nitrogen, is over-nitrogenised. This leads us to inquire as to the immunity of the gouty to phthisis, and on this point there is a great unanimity of opinion.

Gout and tuberculosis are very rarely associated together. Sir Dyce Duckworth, in his book on gout, states, "I think it may be fairly affirmed that gout and active tubercular disease are not often associated. I recognise an antagonistic influence of the gouty upon the tubercular habit, and agree with those who find tubercular processes checked often for long periods and rendered obsolete in virtue of gouty predisposition" (10).

Sir Hermann Weber states that "gout is a most favourable complication of tuberculosis; out of twenty-five cured patients within his knowledge eighteen had developed distinct gout in some form" (19).

In Fagge's *Practice of Medicine* (11) we find the remark, "It would be interesting to know how often deposits of urate of sodium in the great toe-joint are found in bodies which also show evidence of obsolete or recent disease of the apices of the lungs. Antagonism between phthisis and gout has also been generally accepted, and probably not without reason. The period between 25 and 40 in men is very liable to both diseases. Yet cases of their concurrence in the same patient is rare." How is gout so antagonistic to phthisis? Probably through the amount of urea in the blood, and its intimate relationship to uric acid.

When the metabolism of glycocine (a precursor of urea) is interrupted in the liver, there is an abnormal formation of uric

3. Because in health there is merely a trace of uric acid in the blood, according to some physiologists, and Sir Alfred Garrod and Dr. Luff state that there is none in the mammalian blood, or in the blood of birds, whose nitrogen is eliminated as uric acid (5, 14).

4. Because it is insoluble in ordinary media, and troublesome to administer internally on that account.

5. When taken internally it is partly excreted as urea (Landois).

6. That in diseases where its presence is highly marked in the blood, as in leucocythæmia and severe anæmia, diarrhœa is a common symptom (21).

7. Its taste is disagreeable, and no improvement followed its administration to patients here, or the administration of urate of sodium.

Urea, on the contrary, does not cause the pain referred to above; it is also present in irregular gout in the blood, and highly in the urine of the same. It is found in the blood of mammals and birds in health, and it is soluble in the ordinary media employed in pharmacy. It has a not unpleasantly bitter taste, acts as a sialogogue, and improves the appetite. Patients have increased in weight during its administration, and in one case particularly, where there was no addition whatever to the proteid allowance he was on at the time of the onset of his illness, there was a steady improvement in nutrition.

Pure urea is the best form to administer, on account of its more pleasing taste and rapid solubility in ordinary media, water, etc., at ordinary temperatures. Care must be taken not to heat the solvent employed to a high temperature, as the urea is then decomposed into ammonium carbonate; nitrous acid also breaks it up into free nitrogen, carbonic acid, and water.

The phosphate of urea is very soluble in water, and has been administered in phthisis, where there is a marked diminution of phosphoric acid and urea.

The nitrate of urea is soluble in water, but not so freely when any nitric acid is present. It has a very acrid taste; it forms beautiful crystals of the rhombic system when carefully prepared.

Now with regard to the *dosage of urea*: we find urea present in the urine of the tuberculous in varying proportions, but nevertheless there is a constant deficiency; we use this

deficiency as the basis on which to calculate the dose. If we take urine with only two grains of urea in each ounce, it is clear that seven grains are wanting in each ounce to bring the urine up to its normal 2 *per cent.* strength of urea. In the excretion of forty ounces of such urine in the twenty-four hours 280 grains are necessary to bring the complement of urea up to its normal in the time; in fifty ounces of excretion 350 grains are necessary. But as the activity of the patient is much reduced during his sleeping hours, and as during this time he usually takes neither food nor drink, we can eliminate them from the calculation, and this leaves us, say, twelve hours to consider, the urine of which time will require 140 grains to bring it to its normal. This is the point on which the dosage principally hangs, so that 140 grains *per diem* can be administered in suitable doses three times, with intervals of four hours between each dose. If the patient is particularly weak and advanced in disease the full 46.6 grains may be given thrice daily; if he is less seriously ill a smaller dose will suffice. If the urine contains, say, four grains per ounce of urea, then the deficit in the twenty-four hours in fifty ounces of urine would be 250 grains: $9 \text{ grains} - 4 \text{ grains} = 5 \text{ grains} \times 50 = 250 \text{ grains}$, *i.e.* 125 grains in the twelve hours of day, $125 \div 3 = 41.6$ grains at each dose, and as children excrete more urea relatively to their body weight than adults (21), no difference should be made in the principle of dosage.

This quantity of urea should be given in cases where there is ample intake of nitrogenous food and no improvement in the urine; where the patient has not been having sufficient proteid diet, it is wise to increase the amount of proteids (meat, etc.) concurrently with a smaller dose of urea. Harper usually begins with 15 grains or 20 grains thrice daily, and increases it by increments of 10 grains until the patient is consuming 60 grains thrice daily.

That the urea treatment may give rise to uræmia is improbable. There have been no symptoms of uræmia in any of the patients taking the urea. On no occasion has there been the delirium, coma, or convulsions pointing to the nervous type of uræmia, nor has there been any nausea, vomiting, or diarrhœa pointing to the gastro-intestinal type, and these "latter symptoms are remarkably constant" (Dr. Rose-Bradford) (21).

The view that urea is the direct cause of uræmia is not held now. Many patients dying of uræmia excrete 10 to 12 grammes of urea in the last twenty-four hours.

The blood normally contains '015 *per cent.* of urea. Now, in renal disease without uræmia this may increase to '15 *per cent.*, and this when the patient is at the time excreting quantities of urea within the limits of health.

No one has been able to produce all the symptoms of uræmia by injection of urea, but the blood, in ordinary cases of uræmia, contains a large excess of nitrogenous extractives.

Perls and Schottin suggested that abnormal metabolism might produce toxic substances in the blood, giving rise to uræmia, the percentage of extractives found in the blood and muscles in uræmia being far greater than that found in complete calculous anuria (21). Moreover, the phenomena are not those of simple suppression.

Dr. Rose Bradford shows that when available kidney substance is reduced by experiment, there is a considerable increase of nitrogenous extractives found in the tissues, due to their abnormal metabolism, for the urea and the urinary water excreted are both increased (21).

That urea decomposes into ammonia carbonate in the blood (24), and that its toxic effects show themselves in uræmia, was the view held by some, and we know that a direct application of ammonia carbonate to the cerebrum causes some of the symptoms of uræmia. Again, creatin, or creatinin urates, or acid potassic phosphate, when so applied, cause all the symptoms of uræmia; not so urea (Landois).

Bouchard holds that urea is not the toxic body, but that the toxic or poisonous matters are the pigmentary bodies and salts. He found, by comparing the amount of the urine injected with the weight of the animal, that he could get an equivalent, which he termed uro-toxic equivalent, and that in rabbits 25 to 75 c.c. of urine per kilogramme of the body weight was fatal (21).

Dogs have died in convulsions after the subcutaneous injection of urea equal to 1 *per cent.* of their body weight; that this is an enormous quantity will be seen from the data, that a dog weighing 25 lbs. would have a $\frac{1}{4}$ lb. of urea injected into his system; but these convulsions are different to the intermittent convulsions of uræmia. Dr. Harper has administered 120 grains in one dose (7), without any of the symptoms of uræmia, to

phthisical patients, and without any increase in the urine of urea ; and I have administered 180 grains of urea to two patients, and 190 grains to another, in the course of twelve hours, without any ill effect. Moreover, the urine did not show any increase in the amount of urea excreted.

Bernard, Traube, Feltz, and Ritter, all ascribe the symptoms of uræmia to an accumulation of the neutral potassium salts in the blood (Landois), and we know that the acid potassic phosphate, when applied to the brain, produces symptoms of uræmia. These facts show that urea can be administered without any fear on the part of the practitioner that he may produce uræmia.

Action of Urea in Tuberculosis ; ways in which it may Act.

1. It may enable white blood-corpuscles to do more work, *i. e.* increase phagocytosis.

2. As a solvent for the bacilli of tuberculosis it may have a local action.

3. As a general alterative.

4. As a specific anti-toxin to the toxin of the tubercle germ.

1. That uric acid may in the body be formed into urea under certain conditions is well known. Horbaczewski produced uric acid by the interaction of urea and glycocine. This fact has been confirmed by Dr. Latham ; and that uric acid is formed from the leucocytes is held by some on the grounds that in leucocythæmia where uric acid is present in the blood, it is formed from the nuclein of the leucocytes. Again, a relationship is found between the number of leucocytes in the blood and the excretion of uric acid, and is observable in human beings during fasting and after taking food.

During fasting the number of leucocytes falls, and the amount of uric acid excreted falls. After taking food the number of leucocytes increases, and the uric acid excreted rises. Horbaczewski concluded from experiments that uric acid is formed in health by the disintegration of nuclein, and that sudden variations in uric acid production may be due to the breaking up of leucocytes and the conversion of their nuclein into uric acid. It has been shown by many observers that there is an increase of uric acid excretion following a temporary or permanent leucocytosis. Now we know that in the formation of pus and in the other phagocytic actions of the leucocytes

a certain number become *hors de combat*. This is quite to be expected in phthisis, with its pus-containing cavities and its virulent bacteria, and their attendant virulent decomposition products; and if urea aids in the creation of uric acid which draws usually upon these leucocytes, it is clear that more of them are left free to attack the bacilli and its products than would have been the case if no increase of urea had been added to the forces of the blood.

2. That it is a certain destroyer of the bacilli tuberculosis we know from the experiments of Harper, who states that (a) a 1 *per cent.* solution of pure urea added to a virulent culture of the bacillus tuberculosis inhibits the growth of the bacillus in the test-tube in the incubator, and that (b) a 3 *per cent.* solution of urea used in the same way not only inhibits the growth but kills the bacillus (7). We know that the blood usually contains .015 *per cent.* of urea, and the conditions of the body are so different to those of an incubator that it is probable that a solution of urea which outside the body kills the germ may in the body, with the assisting power of the leucocytes, who are now especially free for phagocytic purposes, act as a direct destroyer of the bacillus. That it acts as a solvent on the bacillus has not yet been demonstrated, but the results of the researches of Dr. Ransom (Oxford) read before the British Medical Association in July last show that connective tissue was readily dissolved by urea solution, that the myelin sheath of nerve was rapidly altered and presented appearances similar to those of degeneration, that gelatine was readily dissolved in it, that coagula formed on heating solutions of native proteid were dissolved, and, finally, that a dead frog placed in a saturated urea solution soon became translucent and fell to pieces.

3. That it acts as an alterative to the cell; it may do so in the same way that mercury and iodide remove the masses of round-celled growths in syphilis. The urea may hasten the life processes of the young cells so much that the cells disappear in the form of products, or, as is commonly expressed, are absorbed. Such cells are found around the tubercular nidus (36). Again, the natural disposition of all tissues is to return to the normal; the protoplasm of the cells supplied with the urea is probably induced to return to its normal state, for we do not find urea so extensively distributed through the body as it is for no useful purpose.

4. That it acts as an anti-toxin. We know that there are anti-bodies in the blood. If we treat an animal by injections of a bacterial poison we get a blood serum, which, like the anti-diphtheritic serum, neutralises this poison; if we inject bacteria into an animal we get a serum which kills the same kind of bacteria; if we inject blood-corpuscles from one animal into another we get a serum which dissolves this kind of blood-corpuscle; if we inject milk of one animal into another we get a serum which coagulates this sort of milk, and so on. To speak more generally, by injections of many different foreign cells and foreign substances we get sera which counteract in some way the foreign body injected; we get antagonistic sera, anti-sera; the action of these sera we ascribe to substances which we term anti-bodies (20).

In ordinary health we breathe in innumerable bacilli of various kinds, we swallow them in our food, and yet we don't contract the disease which they may produce under other conditions. Why? Probably because of these anti-bodies. Now the blood is, so to speak, a standard solution possessing special characters which no other solution possesses, and not least amongst the uses it is put to by the body is that of being a medium for the conveyance of such substances as urea, carbonate of sodium, white corpuscles and red corpuscles, and their oxygen. And it is probable, as we have seen, that the formation of uric acid from urea and glycocine can allow the leucocytes a freer hand; that they take advantage of this opportunity to assist in the formation of anti-bodies. And that they may do so is feasible from the results obtained by Besredka, who found that the smallest quantities of leucotoxic or leucocyte-killing serum would cause an increase in the number of leucocytes in the blood; and the fact found by Cantacuzene that the smallest quantities of hæmo-preparing serum stir up the production of new erythrocytes, and referred to by Dr. Max Gruber in the 'Harben Lectures' for 1901.

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The Alkalinity of the Blood in Mental Diseases.⁽¹⁾ By
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DURING the past year I have been engaged in a research on the reaction of the blood in various forms of mental disease. Whilst this and previous similar researches by other workers have not so far contributed largely to our knowledge of the pathology of mental diseases, several important results have been obtained which have a direct bearing upon the treatment of these diseases, especially that of epilepsy. I will shortly describe the method used in the research, the physiology and pathology of the blood-serum, and the variations which the alkalinity of the blood undergoes in various forms of mental disease.

Method.—Under normal conditions the reaction of the human blood is alkaline. The alkalinity is due to the presence of two salts, bicarbonate of soda, NaHCO_3 , and disodic phosphate, Na_2HPO_4 . These two salts are acid salts, and are readily dissociated when brought in contact with litmus, forming a coloured salt. Thus the blood is an alkaline fluid in virtue of these two salts, which are bases in combination with very weak acids.

Up to the present time various investigations have been carried out and different methods used to estimate the alkalinity of the blood. The earlier investigators used the titration method with the organic acids. Zuntz⁽¹⁾ titrated with phosphoric acid, Lassar⁽²⁾ with oxalic acid. These methods were improved upon by Landois⁽³⁾ and this has been in extensive use; the objections to this method are that for clinical purposes it is too elaborate, that too much blood is required, and it takes too much time. The method used in this investigation is that introduced by Wright⁽⁴⁾. This method has obvious advantages over the others, and these are, the quantity of blood required is small; the red blood-corpuscles are completely separated from the serum; the alkalinity can be tested in a few hours, during which time the stable equilibrium of the serum and plasma is fixed—and from a clinical point of view the alkalinity of the serum is the more important, because it comes into such close contact with the tissues, and

may be taken as an index to the changes taking place in the circulating blood.

The method requires a brief description. The necessary apparatus consists of a couple of glass tubes for receiving the blood, which is drawn off from the thumb; of one or two capillary pipettes for measuring and mixing the serum with the titrating acid; and of half a dozen watch-glasses. The blood-tubes and the capillary pipettes are made by drawing out pieces of ordinary glass tubing, after heating in a flame. The necessary reagents consist of (a) red litmus paper; and (b) a series of dilutions of a standardised solution of sulphuric acid.

The thumb is cleansed with soap and water, and sterilised with a 5 *per cent.* solution of formalin; a solution of carbolic acid is inadmissible, as it interferes with the reaction of the blood. The thumb is pricked with a blunt-pointed instrument, and a copious supply of blood is obtained.

The tube must be filled in such a manner that one of the ends may remain perfectly free from the blood. The ends of the tube are then sealed up in the blowpipe flame; the tube is inverted and suspended for a period varying from three to twenty-four hours. A capillary pipette is inserted into the serum, and the serum is allowed to flow in until it occupies 2 cm. of the stem of the capillary pipette; then a mark is made with a blue pencil. The end of the pipette is now quickly inserted into a solution of acid of a known strength, and the acid solution allowed to run in until the lower end of the serum column runs up to the blue mark. In this way an equal quantity of serum and an acid of known strength is obtained. The contents of the tube are blown out on to a clean watch-glass and thoroughly mixed with the end of the pipette. This process is repeated until the contents of the tube are thoroughly mixed. Finally, a series of drops is blown on to the surface of the litmus paper, the reaction is noted, and if the neutral point has not been accurately estimated, fresh titrations are carried out with acids of greater or less strength until the neutral reaction is obtained.

The alkalinity has been returned as the amount of H_2SO_4 in 1 c.c. of acid, which would exactly neutralise 1 c.c. of blood-serum. Thus, by the result, alkalinity 1.385, is meant, that 1000 c.c. of a solution containing this amount of H_2SO_4

would exactly neutralise the alkaline properties of 1000 c.c. of the blood-serum.

Physiology.—The alkalinity undergoes a diurnal variation, being lowest in the morning, gradually rising in the afternoon, becoming less again in the evening (5). It is *increased* during digestion owing to the passage into the circulation of sodium carbonate, which is formed by the production of HCl acid from the sodium chloride in the cells of the stomach. It is *decreased* after severe muscular exercise, owing to the entrance into the circulation of the acid products of muscular metabolism, *e. g.*, sarco-lactic and carbonic acids. Apart from these two conditions, the alkalinity is maintained at a constant level, and may be taken as an index to the amount and activity of oxidation within the tissues, between the blood and the various tissues; also upon it depends the activity, the well-being, and the fighting power of the leucocyte. Recent observations tend to suggest that there is a relationship between the alkalinity and immunity, that the higher the alkalinity the more resistant is the individual to disease from bacterial infection.

Pathology.—Numerous observations are recorded noting the changes in the alkalinity in disease. These changes are constant, and manifest themselves in a lowering of alkalinity, probably owing to the presence in the blood of acid products, lactic, uric, and butyric acids.

1. *In diseases of the blood.*—Simple anæmia; pernicious anæmia; leucocythæmia.

2. *In febrile and cachectic conditions.*—The diminution in fevers is probably due to the insufficiently oxidised acid products formed by the tissue destruction.

3. *In all toxic conditions.*—In diabetes, and especially in diabetic coma; in uræmia, jaundice, gout, and rheumatism.

4. *In certain mental diseases.*—Especially in epilepsy (6) and general paralysis (7).

In obtaining the normal alkalinity, control cases have been selected from the staff of Claybury Asylum—the physicians, clerks, and attendants. Care was taken to avoid the times during which the alkalinity is said to vary, *e. g.*, after food and after severe muscular exercise. Blood was taken at a stated time, 11 a.m., on successive days from each case; the highest value obtained was 1·806, the lowest 1·538. In all, twenty

cases were examined, and these cases showed an average of 1'662. The reason why the control cases are not taken from one class is to show the constancy of the alkalinity—that in spite of the different conditions of living, such as diet, habits, etc., the alkalinity is maintained at a constant value, and varies within physiological limits.

Epilepsy.—Blood was taken from each patient at 11 a.m. on successive days.

a. *During the inter-paroxysmal period.* (By this is meant a minimum interval of seven days between the seizures.)

b. *During the aura.*

c. *After the paroxysm,* a period varying from ten minutes to twenty-four hours after a fit.

Forty cases were examined.

I will select one case, and describe shortly the changes in the alkalinity :

A. B—, æt. 18. Duration of epilepsy, four years ; bodily condition fair.

Family History.—Father intemperate, died of acute Bright's disease, aged 36 ; mother alive and healthy ; six children, four boys, two girls. Patient is the fifth child ; the youngest child is also an epileptic.

History of Fits.—Developed his epilepsy when nine years of age. His mother states that he had a fall on his head when six. On an average has seven fits a month ; grand mal ; two minutes before a fit his right eyelids twitch. Recovery from mental confusion takes place in two hours.

Inter-paroxysmal alkalinity, 1'538. Fit, 8 a.m. ; blood taken at 11 a.m. ; alkalinity, 1'385 ; blood taken at 2.30 p.m. ; alkalinity, 1'538.

Blood taken 60 seconds before a fit—alkalinity, 1'26

„	$\frac{1}{2}$ hour after a fit	„	1'18
„	1 „ „	„	1'26
„	2 hours „	„	1'43
„	4 „ „	„	1'48
„	24 „ „	„	1'58

These results show clearly that the alkalinity of the blood undergoes marked variations in epilepsy. These variations are constant, and manifest themselves in a diminution.

1. The average alkalinity during the inter-paroxysmal period is lower than the average of the control cases.

2. There is a sudden and pronounced fall immediately prior to the onset of the fit.

3. There is a further diminution after the fit is over.

The Diminution in the Inter-paroxysmal Period.—All the cases studied showed this diminution, with the exception of two senile cases. The lowest values of the alkalinity obtained during this period were from cases suffering from gastric catarrh and constipation. This diminution may be explained by the gradual accumulation of toxins of an acid nature in the blood, or it may be the result of deficient metabolism of the body tissues generally.

The fall *immediately prior to the onset of the fit* is difficult to account for, also the time at my disposal is too short to deal with the matter fully.

The *further diminution after the fit is over* is easily explained; it is apparent soon after the fit is over, and lasts for some hours. The alkalinity gradually rises, the rise being more marked in the first hour; the return to the normal varies in the different cases, and on an average takes from five to six hours. This diminution is directly due to the acid products of muscular metabolism, *e.g.*, carbonic and sarco-lactic acids generated during the violent tonic and clonic spasms of the epileptic seizure. This phenomenon is physiological, and is seen, though in a less degree, after muscular exercise. The diminution is scarcely perceptible in cases of petit mal. The variations in the fall met with in the different cases depend upon the number of fits, and the duration and severity of the muscular spasms. These facts, together with the appearance of the fall after the spasms are over, and the gradual rise to normal, seem to prove that this diminution is muscular in origin.

Dementia Paralytica.—Twenty-three cases were examined, and these were classified according to the different clinical types of the disease.

1. *Juvenile General Paralysis.*—Two cases.

2. *Ordinary Chronic General Paralysis.*—Cases with diminished knee-jerks, dilated pupils, and not subject to convulsive seizures. Eight cases.

3. *Acute General Paralysis.*—Cases which run a rapid course, pupils contracted, knee-jerks exaggerated, and subject to convulsive seizures. Eight cases.

4. *Tabetic General Paralysis.*—Five cases.

The examination of the blood of these groups of cases was very instructive, and all showed a low value of alkalinity, much below the average of the control cases; in fact, the highest value obtained in some of these cases, and these were the juvenile general paralyses, was below the lowest physiological limit of the normal alkalinity. The diminution varied in the different groups; the acute cases (Group 3) showed the greatest diminution, the juvenile cases (Group 1) the least. The lowering of the alkalinity in this disease is constant, well marked, and varies according to the type, duration, and progress of the disease.

The lowering of alkalinity by concurrent diseases, and by the products of muscular metabolism, is ruled out in this disease, although these factors may cause a slight and transient diminution in the early stages. The diminution may be regarded as a phenomenon directly associated with general paralysis, due to bio-chemical, abnormal metabolic and degenerative changes taking place in the central nervous system. This persistent lowering of alkalinity may have a different origin from the various degrees of diminution met with in epilepsy, though the factors referred to in the case of the former probably act in the latter. The additional factor in the diminution is probably the general auto-toxæmia which occurs in the progress of this disease. This general auto-toxæmia manifests itself by the presence of choline, neurine and glycerophosphoric acid in the circulation. This is supported by the fact that more choline is found in the blood of cases suffering from acute neuronc degeneration, in which class of cases the alkalinity is lower than in the more chronic variety of the disease. Other factors which tend to maintain a low value of alkalinity are—deficient excretion of the neuronc products by the kidneys; deficient neutralisation by the secretions of glands; and the relative incompetence of the leucocytes. The most marked diminution in this disease occurs in connection with the convulsive seizures, and the more acute the case the greater the diminution. In two of the cases, where the blood was taken after seizures occurring a short time before death, the alkalinity was found to be very low compared with the reduction found in cases of *status epilepticus*. The cause of this somewhat marked lowering before death is probably the terminal auto-intoxication which occurs in

practically all the cases of the disease which do not die suddenly from some accidental cause, such as pneumonia and cardiac failure alone, or following a sudden series of seizures.

Dementia.—Ten cases were examined. These included the different varieties of dementia. All the cases were in good bodily condition.

Secondary Dementia.—Six cases. Alkalinity, 1'662, 1'731, 1'662, 1'59, 1'662, 1'662.

Senile Dementia.—Three cases. Alkalinity, 1'59, 1'662, 1'662.

Organic Dementia.—One case. Alkalinity, 1'662.

The alkalinity in these cases does not undergo any marked variation, but varies within physiological limits. Observations were carried out on the blood of these patients after manual labour. They were sent out to work on the farm, and immediately on their return their blood was taken and tested; the alkalinity was found to be lowered below the lowest physiological limit.

Mania.—In this disease fifteen cases were examined, of which ten were cases of acute mania and the remaining five were cases of chronic mania.

In the acute cases, and especially those who suffered from intense motor restlessness, the alkalinity was reduced. This diminution varied according to the restlessness of the case; the more restless the patient the greater the fall, and as the patient became quiet there was a gradual rise of the alkalinity to normal. During comparative repose the alkalinity remained within its normal limits.

The chronic cases did not show a lowering of alkalinity, and it was maintained at a fairly constant value, except during periods of excitement, when there was a slight lowering of alkalinity.

Melancholia.—Ten cases were examined. Of these eight were acute cases; they were very miserable and depressed; the remaining two were chronic cases.

The alkalinity in these cases was fairly constant, and varied within the normal limits. One case showed a persistent diminution; the writer is of opinion that this bears no relation to the disease, and is explained by the fact that the patient suffered from mitral disease and chronic rheumatism.

CONCLUSIONS.

1. The alkalinity of the blood is physiological in *chronic mania, melancholia, and dementia*.
2. It is lowered in cases of *mania*, during the period of excitement.
3. It undergoes marked variations in *epilepsy, e. g.* :
 - a. It is below normal during the inter-paroxysmal period.
 - b. It undergoes a sudden and pronounced fall immediately prior to the onset of the fit.
 - c. It undergoes a further diminution after the fit is over. This after-diminution depends upon the length of time, the severity of the muscular spasms, and the degree of the alkalinity in the inter-paroxysmal period.
 - d. There is a gradual return of the blood to its normal alkalinity, which takes place in five to six hours.
 - e. There is a relationship between the degree of the alkalinity and the onset of fits, *e. g.*, the higher the alkalinity the less liable is the patient to have a fit.
 - f. It is impossible to elevate and maintain the alkalinity within physiological limits for any appreciable length of time by the administration of drugs.
4. It undergoes a diminution in *dementia paralytica*. This diminution is constant and well marked, and is probably due to the products of neuronie degeneration in the circulation. The variations in the diminution met with depend upon the type, progress, and duration of the disease.

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TABLE I.—*Showing the Alkalinity during the Aura and varying periods after the Epileptic Seizure.*

Case.		Aura.	10 to 30 minutes.	1 hour.	2 hours.	3 hours.	4 hours.	5 to 12 hours.	12 to 24 hours.
1	{ 7 fits 5 "	—	1'0387 —	1'26 1'18	1'385 —	1'43 1'43	— 1'48	— 1'48	1'43 —
2	1 "	1'26	1'18	1'385	—	—	—	1'43	—
3	{ 1 " 2 "	—	—	—	—	1'385 1'48	—	1'538 1'59	—
4	{ 8 " 15 "	—	.831 .831	1'26 1'26	1'385 —	—	1'48	—	— 1'538
5	1 "	—	1'0387	1'26	1'43	—	—	1'538	—
6	{ 5 " 1 "	—	.831 —	1'26 —	1'385 —	—	1'48	—	1'662 —
7	4 "	1'385	1'12	—	1'385	—	1'48	1'59	—
8	1 "	1'18	—	1'26	1'385	—	1'538	—	1'59
9	6 "	—	—	—	—	—	—	1'48	1'59
10	3 "	—	.831	1'12	1'26	—	1'43	1'48	—

TABLE II.—*Showing the Alkalinity in the various Clinical Types of Insanity and of Dementia Paralytica.*

Case.	Type.	Alkalinity.	Alkalinity.	
1	Chronic G.P.	1'48	1'48	
2	"	1'538	1'48	
3	"	1'48	1'43	
4	"	1'43	1'43	
5	"	1'59	1'538	
6	"	1'43	1'43	
7	"	1'385	831	After a severe convulsive seizure.
8	"	1'48	1'48	
9	Juvenile G.P.	1'662	1'662	
10	"	1'662	1'662	
11	Acute G.P.	1'43	1'43	
12	"	1'385	6925	After numerous seizures.
13	"	1'385	1'385	
14	"	1'26	5935	After seizures, and just before death.
15	"	1'385	5935	" " "
16	"	1'43	1'26	
17	"	1'26	1'26	
18	"	1'18	831	After a slight seizure.
19	Tabetic G.P.	1'48	1'48	
20	"	1'59	1'538	
21	"	1'43	1'43	
22	"	1'48	1'48	
23	"	1'48	1'48	
DEMENTIA.				
1	Secondary D.	1'662	1'48	After severe muscular exercise.
2	"	1'731	1'538	" " "
3	"	1'662	1'48	" " "
4	"	1'59	1'385	" " "
5	"	1'662	1'48	" " "
6	"	1'662	1'48	" " "
7	Senile D.	1'59	1'48	" " "
8	"	1'662	1'43	" " "
9	"	1'662	1'48	" " "
10	Organic D.	1'662	1'48	" " "
MANIA.				
1	Acute Mania	1'662	1'48	After a period of excitement.
2	"	1'662	1'662	
3	"	1'731	1'59	24 hours after a period of excitement.
4	"	1'662	1'662	
5	"	1'59	1'48	Acutely maniacal.
6	"	1'662	1'662	
7	"	1'59	1'59	
8	"	1'662	1'48	
9	"	1'59	1'43	3 hours after a period of excitement.
10	"	1'59	1'59	
11	Chronic Mania	1'731	1'731	
12	"	1'662	1'662	
13	"	1'662	1'48	After a period of excitement.
14	"	1'662	1'662	
15	"	1'59	1'59	

TABLE II—*continued.*

Case.	Type.	Alkalinity.	Alkalinity.	
MELANCHOLIA.				
1	Acute Mel.	1'662	1'662	Mitral disease chronic rheumatism.
2	"	1'59	1'48	
3	"	1'662	1'731	
4	"	1'731	1'662	
5	"	1'59	1'59	
6	"	1'59	1'59	
7	"	1'662	1'731	
8	"	1'662	1'662	
9	Chronic Mel.	1'662	1'662	
10	"	1'59	1'662	

(¹) Prepared for the Autumn Meeting of the South Eastern Division, held at Chiswick House, October 29th, 1902.

The Abnormalities of the Palate as Stigmata of Degeneracy. By E. H. HARRISSON, M.B., B.C., B.A.(Cantab),
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THE study of, in many cases trivial, bodily variations and deformities has for many years attracted much attention from a large field of workers, and in no part of this sphere has this study been more elaborated than in that including the criminal and the lunatic. As examples of these studies may be mentioned the numerous papers which have been written, giving copious and precise details concerning the anatomical configuration, the complexion, the shape of the ear, nose, etc., and the physiological eccentricities in certain types of criminal. Of these variations and deformities none have been more thoroughly studied, and at the same time been the subject of more discussion and difference of opinion, than those connected with the shape, size, and general development of the palate.

Owing to the exceptional opportunities enjoyed by the author at Claybury during the past few months, it has been possible for him to add a further contribution to this subject which, owing to difference of method, etc., has, in his opinion,

enabled him to throw more light on the subject. In this connection he wishes to express his deep gratitude to Dr. Robert Jones, of Claybury, for his kindness in allowing him to make full use of the ample material in the asylum, and also for his valuable advice.

Very many authors have written on the abnormalities of the palate. Some thirty years ago Dr. Down⁽¹⁾ appears to have first called attention to the existence of a narrow palate in idiots, his observations being founded on a study of 200 cases.

A little later Dr. Norman W. Kingsley, an American dentist, examined the palates of 200 of the idiots on Randall's Island. He differed in his conclusions from Dr. Down, and even on continuing his investigation he only found that from 5 to 10 *per cent.* of the patients suffered from any reasonable degree of palatal abnormality. He concluded that the palates of idiots did not differ to any appreciable extent from those of the ordinary patients who came to him for treatment. The conclusions drawn by these observers seem to have been arrived at by simple naked-eye inspection only, and it is probable that their contrary conclusions are due to this cause, as without some system of measurement it must be difficult or impossible to obtain data which can serve for the formation of reliable statistics. It is the experience of the writer that even after careful and repeated examination of casts it is no easy matter to locate a doubtful case in any of the coarsely defined types of palate, and consequently it is easy to understand how different persons, when examining palates in living individuals, may arrive at almost opposite conclusions. In Dr. Talbot's opinion measurements are necessary for the formation of accurate statistics, but he considers that they do not adequately give the shape or contour of the palate, but only its size.

Dr. Walter Channing⁽²⁾ found great difficulty in discriminating the palates of idiots from those of school children, which he had taken as his standard of the normal. His conclusions are as follows :

1. Two fifths of the palates of idiots are of fairly good shape.
2. Palates of normal individuals may be deformed.
3. In the idiot it is a difference in degree and not in kind.
4. In either case it shows irregular development anatomically.

5. Palates of average children and idiots under eight years of age probably do not, in the majority of cases, markedly differ.

6. There is no form of palate peculiar to idiocy.

7. The statement that a V-shaped or other variety of palate is a "stigma of degeneracy" remains to be proved.

Dr. Claye Shaw, in a paper in the *Journal of Mental Science* in 1876, came to the following conclusions :

1. There is no necessary connection between a high palate and the degree of mental capacity of the individual. Some idiots have the flattest and most symmetrical palates, whilst many with strong individuality of character have highly arched palates.

2. There is a general relation between the shape of the palate and that of the skull as to length and breadth.

3. A narrow pterygoid width is invariably associated with a high palate, as is also a narrow skull.

4. The width at the first molars is almost invariably less than or equal to the inter-ptyergoid width, and is only very rarely greater.

5. The arching of the palate has nothing to do, as regards height, with premature synostosis of the skull base.

6. The differences in the palatal measurements of various mouths are so slight and so various that it is difficult to see of what service a palatal investigation can be in affording a clue to the mental faculties.

Dr. Ireland, in *The Mental Affections of Children*, 1898, page 53, gives such names as "saddle-shaped, vaulted, keel-shaped, lambdoid" to the palates of genetous idiots. He states no actual reasons for this, but appears to have gained a general impression that palates of this kind exist in idiots of this variety. He is, as a whole, strongly inclined to think that these palates are especially common in idiots, and he thinks "that this deformity is extremely rare with people of ordinary intelligence" (page 53).

Dr. Clouston⁽⁸⁾ refers to this subject in *The Neuroses of Development* (1891). He regards a change in the normal shape of the hard palate as a very interesting and, in his opinion, "very important morphological accompaniment of many of the developmental neuroses. . . . The importance of this change consists, not in any direct effects of the palate bad or good, but in the indication as to brain constitution which it

affords." Dr. Clouston thought his assumptions amply borne out by some investigations he made on 604 of the general population, 286 criminals, 761 persons with acquired insanity, 44 epileptics, 171 persons with adolescent insanity, and 169 idiots and imbeciles. He was enabled to proceed in this rapid manner because he "thought it impossible to express the differences and agreements in size and shape of a series of irregular ovoid cavities, like the hollow of the palate in different cases, by lines across or round special parts of them. . . . After very careful consideration he considered that the simplest and the best way was to adopt a classification that most of them (the palates) seemed to him to fall into naturally." He divided them into three groups, of the "typical," the "neurotic," and the "deformed."

Other writers, as for example, Talbot,⁽⁴⁾ Peterson,⁽⁵⁾ and Charon,⁽⁶⁾ hold more or less similar views to those of Clouston and Langdon Down.

The above references to previous writers on the subject sufficiently explain the present state of opinion on this subject, and the writer will now proceed to describe his own investigations.

The method he has adopted for the preparation of casts of the palate employed during the research will first be referred to, and this will be followed by a description of the types of patients made use of, and of the general method adopted.

A classification of palates will then be given, and this will be followed by a tabulated account of his results and conclusions. It may be added here that the author began this research without any preconceived ideas as to the conclusions at which he might arrive ; and the work, though carried out on perhaps rather narrow lines, should be, if anything, more trustworthy on this account.

The relatively small number of patients made use of is, he hopes, more than compensated for by the extreme care with which the examination of each has been conducted, in spite of the difficulties which have arisen owing to the mental condition of the subjects.

Owing to the impossibility of accurately measuring the palate in a living individual, it was necessary to take plaster-of-Paris casts of the upper jaw and palate of the patients, upon which the subject matter of this thesis is based.

The method of obtaining the casts is that used by dentists

and the instruments and materials required are: Impression trays of various sizes, Godiva composition, and fine plaster of Paris.

The patient is placed in a dentist's chair,* and an impression tray is chosen which fits the teeth and palate. The tray being selected, it is filled with the Godiva composition, which has been previously softened by immersion in hot water, and the impression of the teeth and palate is taken. Great care must be exercised in order that the surface of the composition is smooth, and that the tray is inserted carefully without injuring or indenting the composition. The surface of the filled tray must be held parallel to the plane of the cutting edges of the teeth, and then the tray must be pressed firmly and evenly upwards until the teeth are buried and the composition bulges backwards over the tray below the soft palate. It is kept in this position without releasing the pressure until the composition is set firm and hard, which result usually occurs in from two to three minutes, and then with gentle to-and-fro movements the tray is loosened and removed from the mouth.

From the above description it will be seen that in order to obtain a satisfactory impression it is necessary to gain the complete confidence of the patient, and this is naturally extremely difficult when the operator happens to be dealing with insane patients. Consequently several failures were met with, but by dint of perseverance impressions were satisfactorily obtained from no less than fifty-six patients. After an impression has been obtained the tray and composition are carefully and thoroughly washed. A mixture of plaster of Paris is then made and poured slowly into the wet composition, care being taken that the plaster flows to the bottom of every tooth impression and covers the palate evenly. A pedestal is then made and the whole is inverted on it and left for half an hour in order to ensure complete hardness of the plaster. The tray, composition, and plaster are then placed in boiling water until the composition is again softened, when the tray is pulled steadily away, and the remaining composition is afterwards removed from the plaster cast with the fingers, beginning at the teeth and ending in the middle of the palate.

Having given the method by which the casts were obtained, it is necessary to say a few words about the patients and how they were chosen.

As complete development of the palate and teeth does not

occur until the age of 22 to 25 years is reached, and after the age of 40 senile changes begin to make their appearance, it was considered necessary and expedient that the patients should be between the ages of 25 and 40 years, and therefore patients between those ages were chosen. Secondly, the case-books were gone through *seriatim* for this purpose, and each case was chosen within these limits in all instances where a family history had been taken. Thirdly, only males were used, as it was found that they were not so troublesome as females, and were more easily persuaded to submit to the necessary operations.

It will thus be seen that the cases under consideration include all varieties of insane patients, the only guide to selection being the existence of a family history and an age of from 25 to 40 years (this being entirely irrespective of the shape or size of the palate).

Careful examination of the fifty-six casts resulting in confusion only, it was found absolutely necessary to classify them by actual measurements. The excellent system of measurement suggested by Dr. Goodall⁽⁷⁾ was found to be much too long and tedious for the purposes of the present investigation. After much labour had been expended in careful comparison of the different types, it was found that the following three measurements were in all probability the most useful:—(1) The transverse diameter was taken between the outer edges of the second molar teeth; (2) the depth of the palate was taken at the level of the second molar teeth, measuring from their cutting edges; and (3) the depth of the palate was also taken at the level of the first bicuspid teeth, again from their cutting edges.

Having taken these measurements, it was found necessary to obtain the average measurements of the palates of a number of normal individuals. The same measurements were consequently made on twenty-one skulls chosen from the museum of the London Hospital. The skulls were those of Europeans and Americans, and were of about the average size and shape of that of an ordinary well-developed man.

The measurements so taken were found to vary slightly, namely, the transverse diameters at the level of the second molar teeth varied between 68 mm. and 54 mm., and the average of the twenty-one was 60 mm. The depth at the level

of the second molar teeth varied between 25 mm. and 17 mm., the average being 20 mm. The depth at the level of the first bicuspid teeth varied between 16 mm. and 12 mm., the average being $13\frac{1}{2}$ mm.

Now, in comparing the depth of palates taken from dried skulls with that of casts of palates taken from living individuals, the thickness of the soft parts, namely, the muco-periosteum, must be taken into consideration, and for obtaining this thickness the muco-periosteum was stripped from half of the palates of some patients in the *post-mortem* room of the Claybury Asylum, and was found to average 2 mm.; therefore the average depth of the normal palate at the level of the second molar teeth must be taken as 18 mm., and that at the level of the first bicuspid teeth as $11\frac{1}{2}$ mm.

The measurements of the casts of the palates varied considerably in all diameters, and from a consideration of the figures it was seen that the palates may be divided roughly into four different types, namely, (1) the high narrow; (2) the high broad; (3) the low narrow; and (4) the low broad.

On examining the casts from a general point of view it was soon seen that some palates slope gradually upwards from the incisor teeth to the highest point, whilst others slope more abruptly; and in determining with some degree of accuracy the amount of the slope, the depth at the level of the first bicuspid teeth was found to be of considerable importance. On comparing the measurements of the casts at this level with those of the skulls, it was found that palates can still further be divided into (1) those with a gradual slope backwards from the incisor teeth; (2) those which slope backwards more abruptly; and (3) those with a normal slope backwards. Hence the types of palates found in the fifty-six insane patients examined become twelve in number.

Other differences were observed in a small number of the casts, namely, a few were seen to be oblique or asymmetrical, and others were found to have small projections (*tori*) (one or more in number) along the median line.

Now, in considering the question of abnormalities of the palate as stigmata of degeneracy, the evidence afforded by the plaster casts may best be taken by a consideration of the different types found in order: firstly, with regard to the number of patients with palates of each particular type;

secondly, with regard to the mental condition of such patients ; thirdly, with regard to the number of such patients who are married ; and fourthly, with regard to the number of such patients who have a distinct family history of insanity. In connection with this last consideration it must be stated that in the majority of cases the family history is not very accurate in all details, and only deals with the more gross and obvious forms of mental disease, which, in most cases, have ended fatally. It is common knowledge that very often it is extremely difficult to obtain a complete family history owing to the ignorance and wilfulness of the friends, who refuse to admit that a relative was in an asylum for a certain time and recovered.

Before referring *seriatim* to the different types of palate, and classifying the various patients according to their mental condition, it is desirable to shortly, in order to avoid confusion, define the different words employed for the latter purpose. Two different uses are made of the word "amentia,"⁽⁸⁾ which is employed in the phrases "ordinary amentia," and "high-grade amentia." The former of these is used to indicate the mental condition of patients who are congenitally feeble-minded, but who are not idiots or very low imbeciles, neither of which classes of patient has been employed during the present investigation. The latter term, namely, "high-grade amentia," refers to cases of insanity which have not from birth shown distinct feeble-mindedness, but where, at maturity, this is present to some extent, and is associated with various insane habits, and with an absence of a tendency to develop dementia. These patients thus possess a somewhat slighter degree of degeneracy than do the former. The remaining patients have been grouped under the terms "chronic insanity with dementia," "dementia of the third grade," and "dementia paralytica." The first of these phrases is employed to indicate the mental condition of patients who are suffering from any of the ordinary varieties of mental disease, but who have developed little more than clinically appreciable dementia or secondary feeble-mindedness. The second refers to the mental condition of that large class of patients who may be conveniently grouped under the term "chronic lunatic." They show any of the very numerous common symptom-complexes of mental disease in association with a well-marked degree of dementia. This class of patient, like the preceding, is in a stationary mental condition, and it

might perhaps with advantage be noted here that practically all the cases used during the present investigation are in a fairly stationary mental condition, this having been thought desirable in order to enable a reasonably accurate diagnosis to be made for the purpose of classification. In order that this intention might be carried out without any sorting out of cases, the patients were chosen from the earlier admissions, the later case-records not being used. The third of the terms employed, namely, "dementia paralytica," is synonymous with the term "general paralysis of the insane." There is only one patient of this kind, and he is a very chronic case with slowly progressive dementia.

The different types of palate will now be considered *seriatim*—

1. Of the *high narrow palate* which slopes suddenly from the incisor teeth, there are seven examples. Of these, three belong to patients suffering from dementia of the third grade, two belong to patients suffering from chronic insanity with dementia, and two to patients suffering from high-grade amentia. Two of the above patients are married, and hereditary insanity existed in one case.

2. Of the *high narrow palate* which slopes gradually backwards from the incisor teeth, there are two examples. Of these, one belongs to a patient suffering from ordinary amentia, and the other to a patient suffering from chronic insanity with dementia. Neither of the above patients is married, and hereditary insanity exists in one of them.

3. Of the *high narrow palate* with a normal slope backwards from the incisor teeth, there are two examples. Of these, one belongs to a patient suffering from high-grade amentia, and the other to a patient suffering from dementia of the third grade. Neither of the above patients is married, and there is hereditary insanity in one case.

4. Of the *high broad palate* which slopes suddenly backwards from the incisor teeth, there are four examples. Of these, two belong to patients suffering from dementia of the third grade, one from chronic insanity with dementia, and one from dementia paralytica. One of the above patients is married, and there is hereditary insanity in one case.

5. Of the *high broad palate* which slopes gradually backwards from the incisor teeth, there are seven examples. Of

these, four belong to patients suffering from dementia of the third grade, one from chronic insanity with dementia, one from high-grade amentia, and one from ordinary amentia. One of the above patients is married, and hereditary insanity exists in four cases.

6. Of the *high broad palate* with a normal slope backwards from the incisor teeth, there are five examples. Of these, one belongs to a patient suffering from dementia of the third grade, two from chronic insanity with dementia, and two from high-grade amentia. Two of the above patients are married, and hereditary insanity exists in three cases.

7. Of the *low narrow palate* which slopes backwards from the incisor teeth suddenly, there are five examples. Of these, three belong to patients suffering from dementia of the third grade, one from ordinary amentia, and one from high-grade amentia. Two of the above patients are married, and there is hereditary insanity in two cases.

8. Of the *low narrow palate* which slopes backwards gradually from the incisor teeth, there are five examples. Of these, four belong to patients suffering from dementia of the third grade, and one from ordinary amentia. One of the above patients is married, and hereditary insanity exists in two cases.

9. Of the *low narrow palate* with a normal slope backwards from the incisor teeth, there are four examples. Of these, one belongs to a patient suffering from dementia of the third grade, two from chronic insanity with dementia, and one from ordinary amentia. None of the above patients is married, and hereditary insanity exists in four cases.

10. Of the *low broad palate* which slopes backwards suddenly from the incisor teeth, there are three examples. Of these, one belongs to a patient suffering from dementia of the third grade, one from chronic insanity with dementia, and one from ordinary amentia. None of the above patients is married, and hereditary insanity exists in two cases.

11. Of the *low broad palate* which slopes backwards gradually from the incisor teeth, there are four examples. Of these, two belong to patients suffering from chronic insanity with dementia, and two from high-grade amentia. Three of the above patients are married, and hereditary insanity exists in three cases.



No. 20.—High, narrow, deep in front.



No. 50.—Low, narrow, deep in front.



No. 48.—High, narrow, average in front.



No. 13.—Low, narrow, average in front.



No. 8.—High, narrow, shallow in front.



No. 17.—Low, narrow, shallow in front.

To illustrate Dr. HARRISSON's paper.



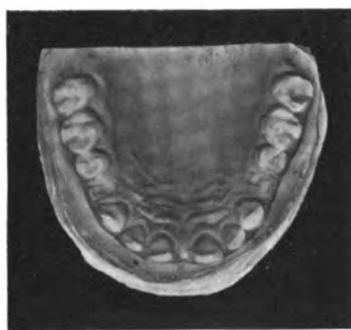
No. 9.- High, broad, deep in front.



No. 47.- Low, broad, deep in front.



No. 38.- High, broad, average in front.



No. 40.- Low, broad, average in front.



No. 1.- High, broad, shallow in front.



No. 10.- Low, broad, shallow in front.

To illustrate Dr. HARRISSON'S paper

12. Of the *low broad palate* with a normal slope backwards from the incisor teeth, there are eight examples. Of these, four belong to patients suffering from dementia of the third grade, two from chronic insanity with dementia, one from high-grade amentia, and one from ordinary amentia. One of the above patients is married, and hereditary insanity exists in six cases.

Having examined the palates *seriatim*, and considered the patients to whom they belong with regard to their mental condition, family history, and civil state, it is interesting and instructive to note that of the thirty patients with marked heredity there are nineteen with broad palates and eleven with narrow palates. There are eleven with high palates and nineteen with low palates, measuring at the level of the second molar teeth; and there are six deep at the first bicuspid, fourteen average at the first bicuspid, and ten shallow at the first bicuspid. Therefore, in the casts of fifty-six patients chosen indiscriminately, the type of palate most commonly found with *well-marked heredity* is the *low broad palate, which is shallow or of the average depth at the first bicuspid*. With regard to civil state, the married patients with low palates are seven in number, and those with high palates are six in number; and the commonest type amongst these is the low broad palate which is of the average depth at the first bicuspid.

The *mental condition* of the fifty-six patients will now be referred to. There are seven patients suffering from *ordinary amentia*, of which

1 has a palate of the type *high narrow, shallow in front*.

I " " " " *broad* " "

I " " " " *low narrow, deep* "

I " " " " " *average* "

I " " " " " *shallow* "

I " " " " " *broad, deep* "

I " " " " " *average* "

and therefore the type of palate most commonly found in patients suffering from *ordinary amentia* is the *low narrow palate which is shallow in front*.

There are ten patients suffering from *high-grade amentia*, of which

2 have palates of the type *high narrow, deep in front*.

I " " " " " *average* "

2 have palates of the type *high broad, deep in front.*

I " " " " *shallow* "

I " " " *low narrow, deep* "

I " " " *broad, average* "

2 " " " " *shallow* "

and therefore the type of palate most commonly found in the *high-grade aments* of the series is the *high broad palate which is of the average depth in front.*

There are fourteen patients suffering from *chronic insanity with dementia*, of which

2 have palates of the type *high narrow, deep in front.*

I " " " " *shallow* "

I " " " " *broad, deep* "

2 " " " " *average* "

I " " " " *shallow* "

2 " " " *low narrow, average* "

I " " " *broad, deep* "

2 " " " *average* "

2 " " " *shallow* "

and therefore the type of palate most commonly found in the patients suffering from *chronic insanity with dementia* is either *high or low broad of average depth in front.*

There are twenty-four patients suffering from *dementia of the third grade*, of which

3 have palates of the type *high narrow, deep in front.*

I " " " " *average* "

2 " " " " *broad, deep* "

I " " " " *average* "

4 " " " " *shallow* "

3 " " " *low narrow, deep* "

I " " " " *average* "

4 " " " " *shallow* "

I " " " *broad, deep* "

4 " " " *average* "

and therefore the type of palate most commonly found in the patients suffering from *dementia of the third grade* is the *low broad or low narrow which is deep in front.*

There is one patient suffering from *dementia paralytica*, and the type of palate in this case is the *high broad palate which is deep in front.*

Certain very interesting and important conclusions are at

once obvious on examination of the preceding remarks and tables. As has been stated, in the patients whose family histories show a gross hereditary taint of insanity the type of palate which is most common *is the low broad palate, which is shallow or of the average depth at the first bicuspid.*

It is known that mental disease is more obviously hereditary as its degree is more marked. For example, the very highest degree of heredity is seen in the case of idiots and severe imbeciles; the degree is less in adolescent cases and in ordinary chronic lunatics of the maniacal or delusional types, and it is still less in toxic and other cases who either recover or pass on into dementia. Lastly, there are many mild and, in many instances, recoverable cases in which the symptoms are very slightly beyond a permissible degree of eccentricity, and in which the only traceable heredity is seen in similar but less severe eccentricity in the case of near relatives. Under these circumstances the fact cited above regarding the type of palate which has been found during this investigation to occur most commonly in cases with a gross heredity of insanity is of importance, as this type of palate should be approximately that found in the most degenerate group of patient. A study of the above tables shows that this is the case. In the ordinary aments the type of palate is a low narrow one which is shallow in front; in the high-grade aments it is high and broad, and of average depth in front; in the cases of chronic insanity with dementia it is either high broad or low broad, and of average depth in front; and, finally, in the cases of dementia of the third grade it is low broad or low narrow and deep in front.

Hence, the palate of insane heredity is essentially a palate which is shallow or, at any rate, of the average depth in front, whatever its other characteristics may be.

A large proportion of the palates, however, are not of this type, as many are deep in front, and especially those of the cases of dementia of the third grade; and it is consequently necessary to suggest a cause for this variety of deformity. The most probable is a *general physical degeneracy*, associated in many cases with defective dental development, with rickets, scurvy, or congenital syphilis, etc. This is supported by the fact that such palates are not uncommonly seen in the "weakling" or in the youngest member of an otherwise healthy

family with no definite hereditary history of mental disease, and in persons of this type who show no signs of mental aberration. It also commonly occurs in the children of persons of alcoholic habits, or who suffer from phthisis or other similar "diathetic diseases."

The conclusions drawn during the present investigation may be briefly summed up as follows :

1. Abnormalities of the palate are common in the insane.
2. These abnormalities may be roughly classified into two large groups, of which the former contains the palate of the hereditary psychopath and the latter the palate of the general degenerate.
3. The former palate is variable in its general type, but as a whole is shallow, or, at any rate, of the average depth in front.
4. The latter palate is also variable in its general type, but is in the main characterised by an increased depth at the level of first bicuspid.

Tables showing Measurements of the Palates in their several Types.

No. of patient.	Transverse diameter.	Depth at 2nd molars.	Depth at 1st bicuspid.
HIGH, NARROW, DEEP IN FRONT.			
6	52 mm.	24 mm.	15 mm.
20	55 mm.	21 mm.	20 mm.
21	58½ mm.	22 mm.	17 mm.
22	58½ mm.	20 mm.	19 mm.
29	55 mm.	22 mm.	15 mm.
37	53 mm.	20 mm.	15 mm.
51	59 mm.	22 mm.	20 mm.
HIGH, NARROW, AVERAGE IN FRONT.			
32	50 mm.	20 mm.	13 mm.
48	52 mm.	22 mm.	13 mm.
HIGH, NARROW, SHALLOW IN FRONT.			
2	54 mm.	23 mm.	10 mm.
8	56 mm.	22 mm.	12 mm.
HIGH, BROAD, DEEP IN FRONT.			
9	65 mm.	21 mm.	19 mm.
35	65½ mm.	24 mm.	19 mm.
44	60 mm.	23 mm.	20 mm.
55	62 mm.	20 mm.	16 mm.

No. of patient.	Transverse diameter.	Depth at 2nd molars.	Depth at 1st bicuspid.
HIGH, BROAD, AVERAGE IN FRONT.			
14	61½ mm.	21 mm.	14 mm.
38	70 mm.	25 mm.	13 mm.
42	62 mm.	21 mm.	13 mm.
52	67 mm.	23 mm.	14 mm.
53	61 mm.	22 mm.	13 mm.
HIGH, BROAD, SHALLOW IN FRONT.			
1	65 mm.	25 mm.	10 mm.
5	61 mm.	25 mm.	11 mm.
15	62½ mm.	21 mm.	9 mm.
25	62 mm.	24½ mm.	11 mm.
26	64 mm.	21 mm.	11 mm.
45	60 mm.	20 mm.	10 mm.
54	60 mm.	23 mm.	10 mm.
LOW, NARROW, DEEP IN FRONT.			
16	55 mm.	17 mm.	19 mm.
19	57 mm.	15 mm.	17 mm.
27	53½ mm.	15 mm.	18 mm.
49	58 mm.	18 mm.	15 mm.
50	53 mm.	16 mm.	15 mm.
LOW, NARROW, AVERAGE IN FRONT.			
7	57½ mm.	17 mm.	13 mm.
13	55 mm.	16 mm.	12 mm.
41	50 mm.	14 mm.	14 mm.
56	48½ mm.	16 mm.	13 mm.
LOW, NARROW, SHALLOW IN FRONT.			
4	51 mm.	19 mm.	9 mm.
17	52½ mm.	12 mm.	10 mm.
18	52½ mm.	12 mm.	10 mm.
23	58½ mm.	19½ mm.	10 mm.
24	54 mm.	18 mm.	11 mm.
LOW, BROAD, DEEP IN FRONT.			
28	60 mm.	18 mm.	16 mm.
43	60 mm.	15 mm.	16 mm.
47	59 mm.	17 mm.	20 mm.
LOW, BROAD, AVERAGE IN FRONT.			
3	63½ mm.	18 mm.	13 mm.
12	63 mm.	18 mm.	14 mm.
30	61 mm.	17½ mm.	13 mm.
31	59½ mm.	15 mm.	12 mm.
34	62 mm.	18 mm.	12 mm.
36	63 mm.	18 mm.	12 mm.
39	63 mm.	17 mm.	13 mm.
40	66 mm.	18 mm.	13 mm.
LOW, BROAD, SHALLOW IN FRONT.			
10	60 mm.	17 mm.	9 mm.
11	60 mm.	17 mm.	10 mm.
33	62 mm.	17 mm.	11 mm.
46	61 mm.	15 mm.	11 mm.

(¹) Langdon-Down, "On some of the Mental Affections of Childhood and Youth," *Journal of Mental Science*, 1887.—(²) Walter Channing, *Journal of Mental Science*, 1897, p. 72.—(³) Clouston, *Neuroses of Development*, 1891, pp. 42—45.—(⁴) Talbot, *Irregularities of the Teeth and their Treatment*, Philadelphia, 1890.—(⁵) Peterson, "The Stigmata of Degeneration," *States Hospital Bulletin*, 1896, vol. i, No. 3.—(⁶) Charon, *Thèse de Paris*, 1891.—(⁷) Goodall, *Journal of Mental Science*, October, 1897.—(⁸) Bolton, *On the Histological Basis of Amentia and Dementia* (in press).

Insanity from Hasheesh.(¹) By JOHN WARNOCK, M.D.,
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BEFORE describing this disease as it occurs in Egypt at the present day, let me give a few historical notes of the use of Cannabis Indica, of which hasheesh is the local preparation. For this, and much other information contained in this paper, I am indebted to the report of the Indian Hemp Drugs Commission of 1893. This valuable report was drawn up by a committee appointed by the Government of India, and in its pages a very full account of the use of hemp drugs in India is to be found. Unfortunately it appears that no lunacy expert sat on the Commission, and in my opinion its findings as to the relations between hemp drugs and insanity are not conclusive.

Mr. Grierson quotes references to hemp drugs in Sanskrit literature as early as 1400 B.C., i.e. 3300 years ago, or about the time of Rameses I in Egypt. In the tenth century of the Christian era, hemp drugs are mentioned as having medicinal properties.

In the Makhzan-el-Adwiya, Cannabis Indica seeds are spoken of as "stimulant and sedative, imparting first a great heat and then a considerable refrigerant effect. The leaves make a good snuff for deterring the brain; the juice of the leaves, applied to the head as a wash, removes dandruff and vermin; drops of the juice thrown into the ear allay pain and destroy worms and insects. It checks diarrhœa, is useful in gonorrhœa, restrains the seminal secretions, and is diuretic." As to evil effects, the writer says:—"Afterwards the sedative effects begin to preside; the spirits sink, the vision darkens, and weakness and madness, melancholy, fearfulness, dropsy, and such like distempers are the sequel, while the seminal secretions

dry up." Its habitual use causes "weakness of the digestive organs, followed by flatulency, indigestion, swellings of the limbs and face, change of complexion, diminution of sexual vigour, loss of teeth, heaviness, cowardice, depraved and wicked ideas, etc."

Ibn Beitar first recognised an insanity from its use, A.D. 1235. Makrizi, writing in the fourteenth century on Egypt, states that in 780 Hegira very severe ordinances were passed in Egypt against the use of the drug. The famous garden in the valley of Dijoncina was rooted up, and all those convicted of the use of the drug were subjected to the extraction of their teeth; but in 799 Hegira the custom re-established itself with more than original vigour. Makrizi writes:—"As its consequence, general corruption of sentiments and manners ensued, modesty disappeared, every base and evil passion was openly indulged in, and nobility of external form alone remained in these infatuated beings."

No doubt many other references to hasheesh might be found in Arabic literature, and perhaps its popular use in Egypt may be traced back further than 540 years.

So much for the historical aspect of the subject. Let us now consider the use of hasheesh in the present day, especially in Egypt.

Besides contrasting hasheeshism and alcoholism, I propose to compare the effects produced by the use of Cannabis Indica in Egypt with Indian experience, as reported by the Indian Hemp Drugs Commission. As to the physiological action of Cannabis Indica, the following experiments are noteworthy:

Dr. Marshall, of Cambridge, records as symptoms (Allbutt's *System of Medicine*):—Dryness of the mouth, paræsthesia and weakness in the legs, an inhibition of self-control; the subject wandered about and felt very happy, the time-sense became impaired, "minutes seemed like hours." The subject laughed and seemed to see the comic side of things; there were lucid intervals which occasionally seemed voluntary; the speech was slurring and the gait ataxic; there was no sleepiness observed. The pulse increased in rate, sensibility was lessened, the face became ashy pale, the pupils reacted and were somewhat dilated; there were no hallucinations.

In other experiments there was sickness, loss of time-sense, debility, and increase of appetite.

In the *Indian Report on Hemp Drugs*, 1894, I find the following :

O'Shaughnessy records the effects of *Cannabis Indica* on dogs, chiefly stupor and paralysis.

Lauder Brunton describes :—Delirium, hallucinations, sleep, gaiety, restlessness, loss of space- and time-senses, anæsthesia and paræsthesia, dilatation of pupils, increase in the amount of the urine.

Experiments on cats by Dr. Evans are also quoted :

Small doses of the drug were given by the mouth to cats. Ataxic and paretic phenomena resulted, tremors, rocking movements, and alterations in the muscular sense.

Dr. D. D. Cunningham made interesting experiments on a monkey, which was compelled to inhale smoke from *Cannabis Indica* habitually for eight months with the following results :

The animal plainly suffered from hallucinations of sight, and it acquired a positive liking for the drug. Although its appetite decreased, it put on fat. The inhalation usually made the animal drowsy and unsteady in gait ; occasionally convulsions and unconsciousness resulted. It is important to note that the hallucinations persisted after the other symptoms of intoxication had disappeared.

At the autopsy a deposit of fat was noticed in the abdomen and pericardium. As this deposition of fat occurred in spite of loss of appetite and loss of body-weight, it appeared that *Cannabis Indica* actually caused a diminution in the waste of the body tissues, and thus had a dietetic value.

There seems reason for believing that *Cannabis Indica* has a peculiarly toxic action on certain individuals. In the *British Medical Journal* of October 3rd, 1896, the case is mentioned of a boy of twelve years of age who suffered from grave toxic symptoms after a dose of ten minims of the pharmacopœial tincture of *Cannabis Indica* thrice daily ; yet similar doses from the identical preparation given to another child produced no bad effects. Other similar cases have been recorded from time to time, and one wonders whether this peculiar susceptibility of certain individuals to the toxic action of moderate doses of *Cannabis Indica* may not partly explain why in this country, where many thousands smoke hasheesh, only a comparatively few suffer from grave toxic symptoms.

Let us now examine the results of the use of hasheesh in

Egypt, where large quantities are used by the inhabitants of the towns, although the importation of the drug is prohibited by law. The fact that about sixteen tons of hasheesh were confiscated during the year 1901 gives some indication of the extent of its use. Most of the drug is consumed by smoking in the gozeh and in cigarettes, but a considerable amount is eaten in pill form and in sweetmeats, magoon, etc.

The usual reason given by patients for using hasheesh is that it induces a general feeling of pleasure and content. It is also alleged that it increases the appetite for food, also the sexual appetite, and relieves feelings of lassitude and depression. When eaten in pills and sweetmeats it seems to be taken chiefly for aphrodisiac purposes.

Probably, as in the habit of opium, alcohol, coca and tobacco, etc., hasheesh is primarily employed on account of its euphoric effects on the nervous system. The need for some such agent exists in almost every race of human beings, especially among the males; local conditions of climate and topography, race traditions, etc., cause variations in the agent selected.

Popular opinion disapproves of the use of hasheesh. Even its moderate use is condemned by the better class of Egyptians; the habit is considered as degrading as secret drinking is with us. The low associations of the habit are partly responsible for the ill-favour with which it is regarded, but without doubt the real reason for its condemnation is the fact that hasheesh users degenerate morally, and therefore all decent people feel bound to hold up the habit to reprobation. From a religious point of view the use of hasheesh is prohibited just as much as alcohol by the Mohammedan creed (Koran, chapters ii and v).

Hasheesh appears, nevertheless, to be used by certain Mohammedan religious teachers (fikkis) as largely as by laymen.

The diagnosis of insanity from hasheesh depends on the history of the case and the patient's statements. The police certificate frequently gives information as to the existence of the habit; but unless this is confirmed otherwise, such evidence is disregarded in making the diagnosis of hasheesh insanity.

The discovery of hasheesh in the patient's clothing, or concealed in his ears or mouth, occasionally betrays the nature of the case. On admission every male patient is questioned with regard

to hasheesh, and a report made on the amount he takes and his attitude towards the charge; excited protests and denials of the habit are known by experience to indicate a hardened hasheesh smoker. As the mental state of the patient improves, he is again questioned about hasheesh, and before discharge he is invited to give full details of his habit. By comparing the repeated statements and by noting his knowledge or ignorance of the various details of hasheesh smoking, such as the price of the gozeh, the different qualities of the drug, etc., it is not difficult in most cases to form an opinion as to whether the case is one of hasheesh. The evidence of relatives is occasionally of use, but is less reliable than the repeated cross-examination of the patient; numbers of the Cairo cases are known to be frequenters of hasheesh cafés from being seen there by hospital employés.

Insanity from hasheesh belongs to the toxic group of insanities, and, like insanity from alcohol, opium, cocaine, etc., has an exogenous toxic cause.

The clinical types of hasheesh insanity vary, but before describing them it will simplify matters to enumerate those met with in alcoholic insanity as follows:

1. *Ordinary alcoholic intoxication*, short in duration; with symptoms of excitement and violence, stupor, exaltation, and various ataxic and paretic phenomena; occasionally real transitory mania.

2. *Delirium tremens*, of longer duration; numerous hallucinations, especially visual; oblivious restless delirium, melancholic in tone; delusions of fear; motor phenomena, tremors, etc.; usually curable.

3. *Alcoholic mania* of various degrees of acuteness; no complete delirium, hallucinations chiefly auditory; maniacal, changing delusions of exaltation or persecution, restlessness and violence; no tremors usually; often curable.

4. *Chronic alcoholic mania*, including alcoholic mania of persecution; suspicion, jealousy, hallucinations of hearing and taste; delusions about tortures, machines, conspiracies, poisoning, wires, etc.; there may be ideas of grandeur or altered personality; often suicidal and homicidal impulses; motor and sensory phenomena occur; usually incurable.

5. *Alcoholic dementia*, often with gross organic brain-lesions, or with hemiplegia, paresis, etc.; loss of memory, mental

facility, loss of interest, dull, apathetic demeanour; various motor and sensory phenomena occur.

6. *Dipsomania*.—This term is used to express the craving for alcohol, and nearly all the foregoing types occur as the results of giving in to this craving. Between his outbreaks of mania or delirium tremens, the dipsomaniac usually shows some mental and physical impairment, especially in the direction of blunted moral feeling. He is usually a practised liar, reckless in his methods of obtaining money to gratify his craving, careless of the claims of relations on him, lazy, dishonourable, often shameless, and often incurable.

Non-nervous results of alcohol.—Almost every organ in the body shows pathological results of alcoholism which need not be enumerated here. Now let us consider the result of using hasheesh. Insanity from hasheesh gives the following types :

1. *Temporary intoxication*.—The smoker of hasheesh becomes dull and drowsy, he feels pleasantly exalted, and the worries of life are temporarily blotted out; fatigue is no longer felt; he is at peace with the world. The drug acts as a stimulant and sedative. This state is to be observed among the *habitués* of hasheesh cafés; such cases do not come to the asylum, though patients recovering from the graver forms of hasheesh insanity often describe what were their feelings during temporary intoxication. Pleasant half-waking dreams, not unlike those of the opium taker, gently occupy the mind, and often the individual feels that he is temporarily some important personage. The active excitement of alcoholic inebriety is uncommon, but if the hasheesh smoker is annoyed or interfered with during his dreams he is liable to become irritable and excited, and to show loss of self-control. A staggering gait makes the condition not unlike that of alcoholic intoxication, while the pleasant, dreamy state approaches that of the opium smoker.

Contrasting the three intoxications, one may say that the mental pose of the hasheesh smoker is more "subjective" than that of the alcoholic, and less so than that of the absorbed opium user. The alcoholic is the most "objective" and demonstrative of the three.

2. *Delirium from hasheesh*, which is accompanied by hallucinations of sight, hearing, taste, and smell, often of an unpleasant kind. Delusions of persecution often occur. The idea that the subject is possessed by a devil or spirit is common. Great

exaltation and the belief that the individual is a sultan or prophet may occur. Suicidal intentions are rare. The restlessness and sleeplessness of these cases are marked features, but usually they do not approach the unending chatter and continual busy movements of the subject of delirium tremens, nor is the absorption in delirious ideas and hallucinations as complete as in the latter. The motor phenomena of delirium tremens, tremors, and ataxy are absent; although some staggering is occasionally noticeable, usually the patient is active and quick in movements. The physical exhaustion and gastrointestinal and hepatic disorders of delirium tremens do not occur. Hasheesh delirium is a less grave state both physically and mentally. Some cases are stuporous in type.

3. *Mania from hasheesh*.—This varies in degree of acuteness from a mild short attack of excitement to a prolonged attack of furious mania ending in exhaustion or even death. Most cases are exalted, and have delusions of grandeur or of religious importance; persecutory delusions occur frequently, and provoke violence towards others, but not suicide. Restlessness, incoherent talking, destructiveness, indecency, and loss of moral feelings and affections, are all ordinary symptoms. A certain impudent dare-devil demeanour is a characteristic symptom. Hallucinations are not so marked as in alcoholic mania, but those of hearing and taste are not uncommon; delusions of being poisoned are often based on the latter variety. A few cases are more melancholic than maniacal in demeanour, and exhibit extreme depression and terror with hallucinations of hearing (threatening voices, etc.). There is no pathognomonic symptom of hasheesh mania, but the transitory nature of many cases is often a guide.

4. *Chronic mania from hasheesh*, including a form of mania or persecution. Many of these cases are not distinguishable from ordinary chronic mania. Hallucinations are not so frequent as in alcoholic chronic mania. The patient is a happier, less worried individual than the alcoholic chronic maniac. The morose, suspicious, jealous demeanour of the alcoholic, his belief in machines, invisible wires, and mysterious tortures are absent, also his motor and sensory troubles. His suicidal and homicidal tendencies are also usually wanting.

5. *Chronic dementia from hasheesh* describes the final stage of the preceding forms. We find no motor or sensory symptoms,

as in alcoholism ; there are loss of memory, apathy, degraded habits, and loss of energy, as in ordinary chronic dementia.

6. The term *cannabinomania* may be employed to describe the mental condition of many hasheesh users between the attacks of the above forms. The individual is a good-for-nothing, lazy fellow, who lives by begging and stealing, and pesters his relations for money to buy hasheesh, often assaulting them when they refuse his demands. The moral degradation of these cases is their most salient symptom ; loss of social position, shamelessness, addiction to lying and theft, and a loose, irregular life, make them a curse to their families. While in the asylum they are notorious for making false charges, refusing to work, and quarrelling. Some deny using hasheesh, but others boast of its stimulating effects. They often have an inordinately high opinion of themselves. They are loud in their complaints of oppression by the police, and emphatically protest their innocence of any misdeeds. Irritability, unconcern as to the future, loss of interest in family, malingering, continual demands for cigarettes, urgent petitions for release, fervent promises of reform, emotional outbreaks when refused their demands, garrulity, abusive threats alternating with extreme servility, are all marks of this state. These patients do not often ask for hasheesh while in the asylum, but occasionally procure it by stealth, though the craving for it does not appear to be so keen as that of a dipsomaniac or a morphinomaniac. No phenomena of " deprivation " are noticeable, as in the latter disease, and therefore the cessation of the habit should be easier than in the case of alcohol or opium, and I believe that it is actually easier.

In the early stages these individuals are usually regarded as criminals, and their moral lapses land them in gaol. Later on, when their intellectual impairment becomes more marked, they are sent to the asylum.

The similarity between this condition and that of the dipsomaniac is evident ; many of the differences are probably due to racial peculiarities.

Contrasting generally hasheesh insanities with those produced by alcohol, the following points stand out :

1. Suicidal intentions are common among alcoholics, rare among hasheesh cases. How far this may be explained by differences in race and religion one cannot say, but it is to be

borne in mind that suicide is rare among the insane of the Arab race and Mohammedan religion.

2. Hasheesh, in Egypt, seems to be a more important factor in the production of insanity in that country than alcohol is in England.

3. As a cause of crime, hasheesh appears to be as important in Egypt as is alcohol in England.

4. The use of hasheesh, unlike that of alcohol, is not followed by any characteristic anatomical lesions, and no physical disorders are known to result from it. I have not found asthma and bronchitis to be specially common among hasheesh smokers; only the physical disorders and lesions met with in the idiopathic insanities occur in insanity from hasheesh. The only exception to this rule being the staggering gait of hasheesh intoxication and delirium.

Let us now consider how far the hasheesh habit is affected by Government regulations:

In Egypt the drug was totally prohibited in 1868, then allowed to be imported on paying duty in 1874. In November, 1877, all hasheesh was confiscated.

In March, 1879, the importation and cultivation of hasheesh were prohibited by Khedivial decree.

In March, 1884, a decree prohibited the cultivation, sale, or importation of hasheesh under penalty of a fine of two to eight pounds Egyptian per oke, the drug to be confiscated and sold for export within fifteen days, a quarter of the price so obtained to be divided among the informers and seizers of the hasheesh. The decree of May, 1891, modified the preceding:

The cultivation of hasheesh was prohibited under a penalty of £E50 to £E100 per feddan. The mere possession of hasheesh became an offence, and the penalty was raised to £E10 to £E50 per kilogramme, with a minimum fine of £E2.

In June, 1892, the Court of Appeal of the Mixed Tribunals decided that the preceding decrees did not apply to foreigners.

In April, 1895, the Native Appeal Court decided that the fine inflicted might be less than £E2.

In January, 1895, an *arrêté* was promulgated, by which the keepers of public establishments (cafés, etc.) were prohibited the sale of hasheesh under a fine of 25 to 100 *p.t.*, the drug to be seized and confiscated. Three condemnations of a café

keeper within six months were to entail the closure of the establishment.

In May, 1900, the preceding *arrêté* was modified by the addition of one to seven days' imprisonment to the fine. The judge in every case will order the confiscation of the hasheesh seized, as well as the apparatus employed in its use. When the offence is the permission of hasheesh smoking on the premises, the shop must be in every case closed for a month. After two convictions the shop will be permanently closed. For the offences of selling hasheesh or providing it for smoking, one conviction is to be followed by permanent closure of the shop.

Numerous convictions are obtained under these *arrêts*, and the importation of hasheesh along the Mediterranean coast is carefully watched, many tons of the drug being annually confiscated; yet the use of hasheesh still continues on a large scale, though not so openly as in former years, and every one who wants to smoke hasheesh seems to have no difficulty in obtaining it. The number of hasheesh cases admitted into the asylum shows an annual diminution, and one hopes that the strenuous efforts now being made to suppress the habit will gradually reduce the asylum admissions from this disease to a small figure.

It is to be noted that the abuse of hasheesh, like that of alcohol, is sometimes only a symptom of incipient insanity.

It has been suggested that if the use of hasheesh were entirely prevented in Egypt its place would be taken by another euphoric agent, probably alcohol. Would this change be for the better? I am inclined to answer in the negative. Alcohol is in other countries such a fertile cause of crime and insanity that its substitution for hasheesh in Egypt would probably result in a worse state of things. Alcohol also seems to have a specially deleterious effect in warm climates and on Oriental races. Probably the wisest policy in Egypt will be to keep the use of hasheesh within bounds without entirely preventing it.

The present system of nominally prohibiting hasheesh, while a large amount is smuggled into the country and smoked in spite of the decrees, may eventually bring about the necessary amount of restriction by raising the price of hasheesh, and rendering its immoderate purchase beyond the means of the majority of habitual hasheesh smokers.

Opium, which is so largely used in India, apparently with little evil effect, is taken to some extent in Egypt; but I have seldom met with insanity among the lower classes attributable to its use. Probably the substitution of the opium habit for that of hasheesh would be an improvement.

In the *Report of the Royal Commission on Opium*, 1895, the conclusion is reached that "the temperate use of opium in India should be viewed in the same light as the temperate use of alcohol in England. The use of opium does not cause insanity. It does not appear responsible for any disease peculiar to itself."

The popular use of hemp drugs is known to exist in Turkey, Greece, Egypt, India, and some of the tropical parts of America, Trinidad, British Guiana, and probably elsewhere.

In most of these countries it is used chiefly as a euphoric agent, but in India the hemp plant is considered to be holy by the Hindoos. Mr. J. M. Campbell, of Bombay, gives interesting details of the worship of the plant.

The Ascetic Mahadev is believed to inhabit the leaf of *Cannabis Indica* (called bhang in India). The preparation of bhang is a religious process accompanied by prayers and incantations. Its use cleanses from sin and atones for evil deeds. It destroys disease and keeps off evil. It brings luck, and is therefore used at weddings, on going a journey, etc. Bhang is much used in temple rites as an offering to Shiva. Vishnu worshippers drink bhang before Baladev. The goddess of smallpox, Shitaladevi, is propitiated by libations of bhang.

The North Indian Mohammedans show much respect for bhang, the spirit of the plant being that of Elijah or Khizr.

Certain Indian sects are devoted to the use of bhang, and drink it at their festivals, believing it to cure all diseases and to bring the user into harmony with the infinite.

Indian policy in regard to hemp drugs has been directed towards "restraining the use and improving the revenue by the imposition of suitable taxation;" "discouraging the consumption by placing restrictions on the cultivation, preparation, and retail, and imposing on their use as high a rate of duty as can be levied without inducing illicit practices;" "limiting the production and sale by a high rate of duty, without placing the drug entirely beyond the reach of those who will insist upon having it." The Commission approve of this policy, and con-

demn the proposal to prohibit the use of the drug in India. They formed the opinion that there is a legitimate use of the drug, generally among the poorest of the population, and this use should not be rendered impossible. As to Burmah, they find that prohibition has been a failure; that the drug is largely smuggled into the country; that all who want it (chiefly Indian immigrants) can get it illicitly; and that the Burmen do not take to the habit, though they evidently have many opportunities to do so. The Commission say that the present illicit traffic in Burmah is demoralising to the Indians and to the Government servants, who are powerless to deal with it. It would be better to license this use of the drug under proper control and taxation than to maintain an unworkable prohibition; however, the sale of the drug should be restricted to Indians, Burmen being still prohibited its use.

The actual restrictions on the use of hemp drugs vary in the different provinces of India; they include the control of the cultivation, manufacture, and taxation of the drug.

Retail and wholesale vendors are licensed, and the possession of more than a certain amount of the drug is illegal.

The Commission, discussing the various provincial systems, approves of a combination of a fixed duty with licence fees for the privilege of vend; the control of cultivation; and the limitation of the number of licensed shops.

Let me now briefly quote from the Indian Hemp Drugs Commission's Report in 1894:

Vol. i, p. 186: "On the whole, the weight of evidence is to the effect that moderation in the use of hemp drugs is not injurious.

"The temptation to excess is not so great as with alcohol."

Vol. i, p. 263: "In regard to the physical effects, the Commission have come to the conclusion that the moderate use of hemp drugs is practically attended by no evil results at all. The excessive use does cause injury, but does not cause asthma. It may indirectly cause dysentery, and may cause bronchitis."

Vol. i, p. 264: "The moderate use of hemp drugs produces no injurious effects on the mind.

"The *excessive use* indicates and intensifies mental instability; it tends to weaken the mind; it may even lead to insanity. It has been shown that the effect of hemp drugs in this respect has hitherto been greatly exaggerated, but that they do sometimes produce insanity seems beyond question.

"Moderate use produces no moral injury whatever. For all practical purposes it may be laid down that there is little or no connection between the use of hemp drugs and crime."

Page 239: "Out of 1344 admissions to the asylums of British India during 1892, there are shown to be only ninety-eight cases (or 7·3 *per cent.*) in which the use of hemp drugs may be reasonably regarded as a factor in causing the insanity."

Let us compare the evidence of other observers :

In *British Guiana*, Dr. T. Ireland reported (*British Medical Journal*, September 10th, 1893) that insanity from Indian hemp is common there; that it causes asthma, and results in acute mania, melancholia, and chronic dementia.

In the *Journal of Mental Science*, January, 1892, Dr. W. S. Barnes, formerly superintendent of the Lunatic Asylum of British Guiana, is quoted as stating that the smoking of hasheesh is a common cause of insanity, often combined with alcohol. "These patients are the most acutely insane amongst the inmates of the public asylum. The mania is fierce, and they are recklessly violent and regardless of consequences, recalling frequently to one's mind the furor of epilepsy. When the form of the disease is melancholia their mental distress is profound, and they require careful watching. The earlier attacks are usually very curable; but they return again and again unless the drug is given up, and at each recurrence recovery becomes less likely. In most cases hallucinations are a very marked feature, and appear to occupy the patient's mind so fully and vividly as to render him almost unconscious of his actual surroundings."

In the *Journal of Mental Science*, January, 1894, "Return East Indies, Consumption of Ganja," Blue Book, is described the use of Indian hemp in India. It is said to produce pleasant excitement, torpor, depression. Large doses cause mania with hallucinations and delusions. Its use is a serious evil, and is a great cause of insanity in Bengal.

In the *Journal of Mental Science*, January, 1894, Surgeon-Captain J. H. T. Walsh, Superintendent of Calcutta Lunatic Asylum, relates two experiments with hasheesh on men. One on swallowing large doses became a little excited, and felt very happy, laughing; the other became drowsy and giddy.

He quotes Indian Asylum Reports from 1862 to 1892, show-

ing that Indian hemp is credited with causing a large amount of the insanity occurring in India.

Dr. Hutchinson, of Patna Lunatic Asylum, India, 1868, thus describes hasheesh cases :—Conjunctivæ congested, pupils generally contracted, peculiar leery look, gait unsteady, great volubility, much laughter or singing. There may be a tendency to rush onwards blindly. No unpleasant after effects. He also describes the maudlin intoxication of ganja smokers, and notes their dark purple lips.

Dr. Wise, of Dacca Asylum, 1872, mentions religious mendicants called Rumawat, who smoke much ganja without ill effect. Between 1882 and 1892 Indian hemp caused 25 to 35 *per cent.* of the insanity in Bengal asylums.

Dr. Walsh thinks that hemp drugs produce only a temporary insanity. If insanity lasts more than ten months he thinks hasheesh was only a contributing cause.

In the report for the year 1899 of the Bengal asylums, it is stated that 45 out of 220 cases admitted were due to the use of *Cannabis Indica*.

In Egypt, statistics are available since the year 1895. During the six years 1896—1901, out of 2564 male cases of insanity admitted to the Egyptian Asylum at Cairo, 689 were attributed to the abuse of hasheesh, *i.e.*, nearly 27 *per cent.* Very few female patients used hasheesh, and it is noteworthy that insanity is more than three times as common among the hasheesh-using sex as among women, who, comparatively, seldom use the drug.

I think this difference in the insanity rate between the sexes is significant, and goes a long way to prove the importance of hasheesh as a cause of insanity among Egyptian men. Let it also be remembered that in England insanity is more frequent among women than among men (35 to 31).

My experience does not confirm the Indian Commission's belief that *Cannabis Indica* only *sometimes* causes insanity. In Egypt it *frequently* causes insanity. As to whether excessive use of hemp drugs is commoner here than in India I can give no opinion, but many thousands use it daily here. Probably only excessive users, or persons peculiarly susceptible to its toxic effects, become so insane as to need asylum treatment. Whether the moderate use of hasheesh has ill effects I have no means of judging, and this paper is now read to elicit the

opinions of my colleagues in Egypt, whose daily practice must give them opportunities of studying the effects of the ordinary use of hasheesh. I should be grateful for information on this question.

I have never met with dysentery or bronchitis as the direct result of the use of hasheesh.

Again, in my experience, I find that persons insane from hasheesh have a proneness to commit crimes, especially those of violence, and I have a strong suspicion that much disorderly conduct results from hasheesh smoking, just as alcohol among Europeans leads to such misconduct.

To sum up, the use of Cannabis Indica in Egypt seems to have graver mental and social results than in India, and is responsible for a large amount of insanity and crime in this country.

(¹) Extracts from this paper were read at the Egyptian Medical Congress at Cairo in December, 1902.

Clinical Notes and Cases.

A Case of Cysticercus Cellulosæ Causing Insanity.(¹)

By R. SINCLAIR BLACK, M.A., M.D., D.P.H., Medical Superintendent, Government Hospital and Asylum, Robben Island, Cape Colony.

TÆNIA SOLIUM is common enough in this country in man, but its cystic stage is, I think, met with very infrequently; that is the reason I bring this short paper before the meeting in order to elucidate whether cases of the following kind are met with in any frequency in South Africa.

The so-called cysticercus is, of course, the cystic stage of the *Tænia solium*, its larval condition, which, before developing into the adult sexual tapeworm, must be taken into the alimentary canal of an animal. How does the cyst or bladderworm get to those inner parts of the body in which it is found, so to speak, imprisoned? It is believed that the outer shell of the ovum is digested by the gastric fluid, and that the emergent

embryo bores its way through the intestinal walls, getting into the stream of the blood, whereby it is carried and deposited in this or that organ.

It is stated that the cystworm is seldom met with in an animal that is liable to the corresponding cestoid worm ; but this occasionally happens, as in the case of man, the cyst of the tapeworm being an occasional, though rare, inhabitant of the human body. How does this happen ? Possibly one or more of the ripe joints of the tapeworm may ascend into the stomach, where the embryos are set free by the digestion of their cases ; or a pod may be broken by accident or violence while yet within the bowel ; or some of the eggs may chance to be swallowed by man. In any of these cases the liberated embryo pursues its natural instinct, migrating in the usual way, and gets fixed in the uncongenial soil of a wrong animal. This condition is the only known instance in which man is liable to the larval and mature form of a cestoid entozoon.

Fagge states that as a bladderworm the parasite is most frequently observed in the eye and the brain ; but it is very likely, he says, that it is really most frequently present in the muscles and subcutaneous tissue, where, however, it is apt to escape notice. He states that it is often solitary, or present in small numbers. It is remarkable that patients with tapeworms do not more frequently become affected with bladderworms. As a matter of fact very few of those who have a tapeworm become affected with cysticerci ; but conversely von Graafe found that among thirteen patients with cysticerci in the eye five had tapeworms.

This bladderworm is found, as you are aware, chiefly in the pig, being the cause of measly pork ; but it is found occasionally in the monkey, dog, and other animals. In the pig it occurs principally in the connective tissues, between the fascicles of the voluntary muscles, and also in the liver and brain.

Cysticerci are the most frequent parasites of the human eye. Da Costa says that they cannot as a rule be diagnosed, except they be in a position in which they can be seen or felt, or if the little tumours they occasion in the subcutaneous tissues are extirpated and examined. In the brain, he says, the chief symptom is violent and rapidly increasing epilepsy. That cysticercus as a cause of insanity is very uncommon may be taken from the following :—In the proceedings of the British Neurological

Society no mention is made of cysticeri in the brain. Gowers alludes only casually to it ; Beevor not at all.

In Leuckart's *Parasites of Man* an excellent account will be found of the development and frequency of cysticercus in parts of Europe, where the subject has been scientifically investigated.

There is a pretty full account written by Collins, of New York, in *Twentieth Century Practice* and his description fairly tallies with the following case.

Ford Robertson, in his new book on mental pathology, makes no mention of it.

The writer in *Twentieth Century Practice* devotes half a dozen pages to cysticeri and echinococci as affecting the brain. He states that the former are more common than the latter. In some cases, he says that there are no symptoms at all ; in others there are various psychoses, such as hysteria, hypochondriasis, and acute mania ; and in others the symptoms of brain tumour occur ; he adds that the symptoms vary very much from time to time. He describes various motor symptoms, and says that they may resemble Jacksonian epilepsy. He admits that it is impossible to diagnose the disease, except inferentially, from any multiple cerebral tumour ; but I think that if cysticeri were noticed in the eye with such irritative brain symptoms, diagnosis might be made of cysticeri on the brain.

In Niemeyer's *Practice of Medicine* six lines are devoted to the subject.

The subject, therefore, is of some interest on account of its rarity.

In the Robben Island Asylum this condition existed in a patient named S—, a Kaffir criminal lunatic, who, with two other natives, was concerned in the murder of a child by throwing it from a railway carriage. On admission he was classed as suffering from acute mania ; he was noisy, and had a staggering gait ; occasionally his sight was bad, no doubt from the presence of cysticeri within the eyeball. He was admitted on May 12th, 1899, and died, after a series of epileptiform fits, on December 7th, 1900.

The case from admission steadily progressed from bad to worse. After observing him for some time I classed him as a general paralytic. He was quite incoherent, had a staggering gait, was dirty, destructive, and often shouting in his single

room at night; he had frequent epileptiform convulsions not confined to one side or the other. Sometimes he appeared to be in great pain, and threw himself about. I several times had to administer hyoscine hypodermically. The case steadily got worse, and he ultimately became generally paralysed; convulsive seizures occurred at intervals, and in one series of these he died.

Post-mortem examination showed excess of cerebro-spinal fluid, general congestion of cerebral vessels, congestion of lungs, liver, and kidneys, thickening of mitral valves. Over the frontal region of the cerebrum, numerous cysticerci, adhering to the pia mater and embedding themselves in the grey matter of the brain, were scattered. Over the motor area, particularly about the fissure of Rolando, they were very numerous, covering the whole surface with small semi-transparent vesicles about the size of a pea; when one of these was taken out it showed a white spot on the surface—the head of the cystic worm.

Over the sensory area of the brain the cysts were infrequent, as also at the base of the brain; they were, however, very deeply embedded in the walls of the lateral ventricles, the ventricular surface of the optic thalamus and the corpus striatum being studded thickly with these cysts.

In the fourth ventricle the condition was very interesting; five cysts hung by delicate pedicles from the fine membrane lining the exposed surface of the ventricle, and floated about in the cerebro-spinal fluid; the cerebellum was free.

The cysts all seemed to have origin from the pia mater, having evidently been carried in a swarm by the blood-vessels to the sites in which they took root as ova and grew into cysts. There must altogether have been several hundreds of these cysts in the cerebrum, and it was impossible to separate the membrane from the surface of the cerebrum without tearing the brain to pieces. The mental state of the patient was amply explained by the condition of the brain.

The cysts were all of nearly the same size, one eighth to a quarter of an inch in diameter. Some seemed older than others, with thick walls; others were apparently more recent, with transparent walls.

In the body generally, wherever the muscle was cut into, cysts were found lying between the fascicles of the muscles.

The cysts in the muscles of the body appeared much fresher than many of those in the brain, being all plump and semi-transparent; the head of the bladderworm being very discernible. They were particularly abundant in the intercostal muscles, and were also present in the diaphragm. They were found sparsely in the muscle of the heart, and in the connective tissue under the pericardium.

I did not observe them in the cutaneous connective tissues, or in the lungs, liver, or spleen, but they were found in the connective tissue round the kidneys.

Altogether there must have been several thousand of these cysts in the body generally, and the pain suffered by the unfortunate man must have been acute and prolonged, only mitigated by the profound dementia resulting from the gross cerebral lesions.

Though I recognised the condition at once on making the *post-mortem* examination, I did not, till I read up the literature of the subject, recognise the great interest of the case, and I very much regret that I did not carefully search the intestinal tract for tapeworms, or the eye for cysticerci, as I would otherwise have done. I may, however, say that I had frequent occasion to see the dejecta of this patient when visiting him in his single room, and I never noticed any evidence of tapeworm.

In the 'Report of Asylums for Cape Colony' for 1899 I observed that my friend Dr. Conry, medical superintendent of Fort Beaufort Asylum, had a very similar case; I consequently wrote to him regarding it, and he furnished me with the following interesting notes, which he has kindly given me permission to read to you. The case tallies very closely with my own.

I am sure the Society would consider it of interest if other cases of this kind could be reported.

W. B.—, admitted to Fort Beaufort Asylum from Grahamstown January 23rd, 1899, suffering from epileptic dementia.

Notes taken from the Case-book.

January.—Is excitable and has a difficulty in understanding what is said to him; speech slow and laboured; epileptic fits not frequent.

March.—Excited if spoken to; wants to go home; quarrelsome; fits not frequent.

June.—Excited and incoherent if spoken to; quarrelsome; inclined to be violent.

September 5th.—Vacant-looking ; quarrelsome ; tries to bite ; fits much more frequent.

September 10th.—Fits more severe ; difficulty in swallowing ; unable to answer when spoken to.

September 20th.—Unable to answer when spoken to ; lies in a semi-conscious state ; cannot swallow ; fed *per rectum* ; fits continuous day and night.

September 30th.—Dead.

Post-mortem notes. Autopsy made thirteen hours after death.

Body well nourished ; head well shaped. On removing calvarium dura mater non-adherent, all blood-vessels very full and prominent, longitudinal sinus bulging. On removing the dura mater, vessels still very prominent, pia arachnoid friable, surface of grey matter very soft and pinkish-looking, the least touch causing the convolutions to peel off. The pia arachnoid could not be removed without loosening the surface of the convolutions. When the pia mater was removed the convolutions did not look grey, but pinkish. The brain presented numerous small masses, nodules of a semi-cartilaginous feel, resisting the knife ; they were about the size of an ordinary pea, and were numerous throughout the cerebrum and cerebellum. They were not in the spinal cord. They were in the walls of the ventricles, and could be seen and felt protruding from the surface. They had a pinkish tint, probably from the colour of their investing membrane ; internally they were white, and firm in character. They appeared to be dried-up cysts ; they could be easily separated from the brain tissue. The cysts were not shrunken ; the contents must have become dry, as the cyst sac was full. There were also numerous cysticerci studded throughout both cerebrum and cerebellum. There were a good many in the ventricles, some attached by thin pedicles, a few floating loose. They were about one quarter inch in diameter, almost transparent, and showed a white spot at one point in their walls. They floated easily in water. Occasionally two were attached together by a thin pedicle. Their membrane was tough ; it required a firm squeeze to rupture the cyst. There were no cysts found in any other part of the body.

(¹) Read before the Cape Town Branch of the British Medical Association.

A Case of Cysticercus Cellulosæ of the Brain. Reported by Dr. W. C. SULLIVAN (with the permission of the Prison Commissioners).

D. R—, æt. 27, butler, of Italian nationality, resident in England for past eight months, married, two children, the younger aged six weeks ; in prison for petty larceny.

Nothing special in family history. No illness of note in patient's own antecedents, except that two years ago he is said to have had a "fit," in which spasm of right hand and arm preceded loss of conscious-

ness ; there was subsequent aphasia and paresis of the right side, but these symptoms cleared up completely within about two days, and patient has had no nervous troubles since. He is not known ever to have suffered from tapeworm.

Owing to difficulties of language, slight mental defect might, of course, have passed unnoticed ; but marked enfeeblement of intellect was quite excluded by his general demeanour and his ready adaptation to his surroundings.

The first symptoms of illness appeared on October 24th, six weeks after patient's admission to prison. On that date he complained of headache, which did not present any special characters, and was not accompanied by fever. During the two following days the headache continued, still without other symptoms and with normal temperature. On October 27th, however, the patient stated he had had rigors during the night, that the pain in the head had become much more severe, and that his vision was dim. His temperature was 102.5° F. ; pulse 64 ; there was marked retraction of the head ; pupils were contracted, equal, and did not react to light or on convergence ; Kernig's sign was present on both sides. There was a very profuse discharge of sero-purulent fluid from the right ear. This, the patient stated, had commenced the evening of the previous day. The sediment from this fluid examined under the microscope showed *tænia* hooklets. The patient rapidly became delirious, appeared to become totally blind, and had retention of urine. At noon he had a slight attack of general convulsions, followed by a phase of co-ordinated movements of clutching the throat and pulling the nose. After that time he remained in a state of coma, with sighing and irregular breathing ; temperature remained at 102° F., and pulse about 68. Two hours later he died by sudden respiratory failure.

Post-mortem examination.—The thoracic and abdominal organs were healthy ; there was no trace of tapeworm in the intestines.

On removal of the calvarium several rounded impressions were visible on the inner surface of both parietal bones, the bony tissue where it was most worn being little thicker than parchment. These depressions corresponded to prominences produced by cysts in the subdural space. The dura mater was healthy, and was nowhere adherent to the cyst wall. It presented, however, a spicule of ossification on the right side close to the superior longitudinal sinus, and at this point was adherent to the pia mater over the ascending parietal convolution. Several cysts projected on the surface of the brain, especially in the larger fissures. At the base of the brain was a large quantity of thin purulent matter bathing the pons and medulla and extending along the sheaths of the cranial nerves.

The dura over the pars petrosa appeared healthy. There was no perforation of the tympanic plate. On opening the middle ear the cavity was found to be filled with thin purulent matter similar to that within the cranium. The mucous membrane and ossicles appeared normal. The mode of communication between the tympanic cavity and the subdural space could not be determined. The cysticerci were those of *Tænia solium*.

Occasional Notes.

Lunacy Law Reform in relation to the Treatment of Incipient Insanity.

The accuracy of the description of the present legislative provisions for the insane as the *Lunacy Act* has often been questioned, and there, indeed, seem many well-founded reasons for believing that they would have been more correctly described as the *Lunatic Act*.

The Bill on which this Act was founded was introduced at a time when John Bull (as Dr. Mercier recently remarked) was suffering from considerable mental disturbance excited by the Weldon case. The disorder took the form of morbid fears about the liberty of the subject, with delusions of suspicion against the medical profession. The Bill, as originally introduced, affords ample evidence of these symptoms, but fortunately several years of delay intervened (during which the sufferer had to some extent recovered) before this insane Bill became lunatic law.

The animus against the medical profession was well shown in the clause in the original Bill which excluded medical men from taking charge of single cases of insanity. An ex-convict, an habitual drunkard, or even a lunatic, was (and is still) at liberty to take charge of such cases, while all medical men (unless struck off the register for infamous conduct) were disqualified. That such a clause should have been introduced in two successive Bills is evidence of the spirit of the framers, and is confirmed by the extreme severity of the penal provisions of the Act against medical men. Throughout the Act lunatics are treated as veritable, and their doctors as probable, criminals.

The alleged lunatic was always spoken of as being "accused" of insanity, of being "incarcerated" in an asylum, and so on; whilst under the existing Act power is given to the magistrates to order these sick persons before them, to delay their proper medical treatment for days and weeks, even to override the written advice of two medical men, and to virtually discharge the patient after admission to hospital (asylum). This last power was recently exercised, resulting

in the suicide of the patient, whilst the other powers of delay have led to homicide, homicidal violence, or suicide. The magistrates, on the whole, however, have acted with astonishing discretion, and have rarely exercised the powers given them in the Act to practise as transcendental lunacy physicians.

The criminality of being mentally sick necessarily involves criminality in those who are accessory to the crime. Hence the Act provides that any person undertaking for payment to take charge of an invalid against whom mental disorder can be even alleged, is (by Sec. 315) guilty of a misdemeanour. The liberty of the subject, which this Act was designed to protect against the utterly improbable possibility of a sane person being detained in an asylum, is outraged in the grossest manner in three different directions—*viz.*, by delaying and deterring sick persons from obtaining treatment under certificates; by forcing certification on others before they need it; and by preventing medical men and nurses from the legitimate exercise of their vocation in treating these invalids.

Bad laws are badly obeyed, and the lunacy law, being harsh, unjust, and absurd, is no exception to the rule. To the intense popular objection to being considered a lunatic (which is evidenced throughout our literature, and by a hundred contemptuous phrases in the vernacular) has been added the equally wide-spread dislike to magisterial interference. Hence a much more universal desire to escape the meshes of the law; and this is aided by the fear that has been established in medical men by the penal threats of the Act, and by incomplete protection against prosecution for certifying insanity.

The manifold hardships and gross interference with the treatment of mental diseases in their early stages, as a result of the existing law, formed the subject of a discussion at the Carlisle meeting of the British Medical Association in 1896, when a resolution was passed leading to the formation of a conjoint Committee of the British Medical and Medico-Psychological Associations. This Committee was ultimately received as a deputation by the Lord Chancellor, who adopted into his Bill, almost without alteration, a clause moulded on that in the Scottish Act. This clause provides for the treatment of incipient and unconfirmed insanity for a period of six months without certification, and for notification of the fact to the Lunacy Commission.

Sir William Gowers, at the November meeting of the Medico-Psychological Association, read an address pointing out this defect in the law, and recommended much the same amendments. His testimony is all the more valuable from its being arrived at independently, he being apparently unacquainted with the Lord Chancellor's adoption of this clause four years ago.

Treatment of incipient and unconfirmed insanity provided in this clause if it becomes law, will need to be supplemented by some regulations in regard to the character and qualifications of the persons undertaking it. Ignorance may be worse than cruelty, and the incipiently insane person who is well fed, well clad, and tenderly neglected in the nursing-home bed or the genteel back parlour until hope of recovery is lost, is really subjected to the most grievous neglect. Under existing conditions such neglect, it is to be feared, is of but too common occurrence.

A considerable number of those engaged in the treatment of unconfirmed insanity are highly qualified for the work by experience or special aptitude, but there are many not so qualified. There seems, indeed, to be a very wide-spread popular opinion that when all else has failed a "patient" may be taken who, like the Hibernian pig, will not only "pay the rent," but something more.

The housing accommodation of incipient cases is not always the best that could be desired. There is often no opportunity for private exercise, so that the patient is unduly confined to the house, or, to avoid inconvenience to other inmates, to bed. To escape the attention or the annoyance of neighbours, and to overcome the noise of the locality, sedatives are often unduly resorted to, while the patient is frequently allowed to indulge many kinds of ill habits unchecked and uncontrolled except by chemical means.

Uncertified care may therefore be either the best or the worst form of treatment, and may bring either salvation or utter ruin to the patient. Such treatment should not be left, as at present, to be undertaken by any person, however unqualified, and under any conditions, however unfitting.

The notification of treatment would enable the Lunacy Commission to obtain information which they have now no means of acquiring, and of framing regulations which would

tend to obviate the present very serious irregularities. This would entail much labour, and would necessitate that increase in the *personnel* of the Commission which has long been required.

The Lord Chancellor has shown himself so much interested and so open-minded on lunacy questions, that direct representations to him would be much more practical and successful than to put the whole lunacy law into the hands of a Royal Commission. A Royal Commission, indeed, may be regarded as the Western equivalent of the car of Juggernaut. Fanatics rush to prostrate their crude ideas beneath its ponderous examination wheels, happy ever after in having them recorded in the report. Hence the conclusions of the Commission are commonly a compromise of extreme rather than a composite of all views. From such a result we may pray to be delivered.

The lunacy law wants reform on many points, but first it is necessary to persuade those concerned in legislation that the medical profession is not in a conspiracy to shut up all the community in asylums, but, on the contrary, is really desirous of doing good to the insane; that the insane are not criminals, but sick persons needing the most careful, skilful, and tender treatment, especially in the early stages of the disease.

The Legislature needs also to be taught that these sick persons have a right, equally with other sick persons, to obtain necessary treatment, without the delay of a moment by legal procedure, and that to sacrifice this right to the fantastic fear of a hitherto uncommitted crime is a disgrace to our national character for common sense and humanity.

In Scotland, where the law is sane, and has not a quarter of the safeguards and none of the terrific threats against medical men found in the English law, no case has arisen in which any person has been proved to be illegally detained. The late Lord Shaftesbury vainly pointed out that no such case had ever occurred in England.

The liberty of the subject bogey should be relegated to a legal limbo, and lunacy legislation should be based, not on panic and prejudice, but on common sense and justice.

If the present Lord Chancellor is approached in a suitable manner, we believe that English lunacy matters may yet be dealt with by "sane law in a sane Act."

Insanity and Life Assurance.

The life assurance of the insane was recently dealt with by Dr. Poore in his Presidential Address to the Life Assurance Medical Officers' Association, and in the discussion Dr. Savage suggested the possibility of the formation of an association for the assurance of the insane.

Dr. Poore pointed out that every life might be insurable if the statistics necessary to form conclusions of its probable duration were forthcoming, and that in regard to the insane in asylums more complete age and *post-mortem* statistics were available than for any other class of the community. He expressed the opinion that when a person had been in an asylum for some years, and the mental condition had become chronic, the life is probably a good one from the assurance point of view.

Asylum life, with its freedom from worries, dietary irregularities, etc., no doubt does prolong the life of many patients, even when suffering from associated physical disease. The asylum *post-mortem* table often affords examples of this prolongation of life in connection with an extent of heart, kidney, and liver disease such as are rarely seen elsewhere.

Asylum inmates, indeed, when chronic and not affected with progressive disease, such as general paralysis, epilepsy, or phthisis, have a good expectation of life, and even when the insanity is accompanied by bodily disease it is probably about as good as in a sane person suffering similarly.

Asylum statistics (Table No. IV) show that patients live on for half a century and more after admission, and it will be seen by a study of this table in reports of large asylums how very regular is the proportion of survivals after the first four years from admission.

Statistics such as these demonstrate that a general average would not be difficult to calculate on such chronic cases, but an equitable estimation of prospective life would need to be based on a careful examination of the individual case.

Discharge from the asylum, as Dr. Poore pointed out, would tend to shorten life, but we trust that this would never become an argument in favour of detention, but would only be regarded as an extra risk—from the standpoint of life assurance.

Liberty of the Lunatic.

The public from time to time is sadly distressed by the occurrence of crimes committed by lunatics whose lunacy has in many cases been known and recognised prior to the criminal acts. Unless, however, the lunatic has previously inhabited an asylum, the occurrence is accepted as in the natural course of things, and in no way regarded as an avoidable event.

This JOURNAL has frequently had occasion to comment on this subject, and there can be little doubt that some at least of these cases might be prevented by an alternative to the present legal procedure in putting an insane person under control.

Lunacy certification rests on the fact of a medical man being able to put into writing a description of facts indicating insanity observed at the time of the interview, and this at present is the essential evidence on which a lunatic can be restrained.

Lunatics, however, may, and often do, decline to be interviewed by a medical man; they may decline to speak or do anything in his presence, or may control all expression of their insanity. Moreover, a continuous or occasional insanity of conduct may exist which does not show itself sufficiently during an interview to form the basis of a certificate.

Such lunatics, although their insanity is manifest to their friends and relatives, may remain uncontrolled for days, weeks, or months, and not infrequently prove their insanity by their criminal acts, thus shocking the community and furnishing startling head-lines for the newspapers.

The law has surely a hiatus here. Ample evidence of continuous insanity might be obtained from lay persons, and (apart from the certification interview) from medical men. Without the certificate, however, no restraint is possible in private cases, but amongst the poor, by stretching the law, the patient is often taken to the workhouse.

This difficulty is an additional argument in favour of reception-houses. If these were established, power might be given to the magistrates to order the detention therein of persons in regard to whom satisfactory *primâ facie* evidence of insanity had been adduced (apart from medical certificates). Some such provision would save many lives and much suffering.

Tuberculosis Committee Report.

The statistical tables of this report have been subjected to very severe adverse criticism, which certainly has a basis of justification.

We cannot but wish, however, that the criticism had been addressed to this JOURNAL rather than to the pages of a contemporary.

The statistical differences thus pointed out are fortunately not of vital importance, and in no way vitiate the conclusions of the report, which is a contribution of the utmost value.

The incident emphasises the desirability, in all statistical matters of an original character, of obtaining the criticism and advice of a skilled statistician.

Insane Poor under Private Care.

The contribution on the above subject by the Secretary of the Scotch Board of Lunacy, at the recent Belgian Congress, is a valuable description of this mode of treatment as at present carried out in Scotland.

Mr. Spence objects to the term "boarding out" as applied to the system, as giving the erroneous impression that "the essence of the method lies in removing patients from asylums." Private Care is certainly a non-committal and better term.

The statistics show that no fewer than 2631 persons are thus provided for, 1597 being placed singly with relatives (954) or strangers (623), while 1054 are in 477 houses licensed to contain two, three, or four patients.

Two thousand homes, therefore, are found in Scotland in which these cases can be satisfactorily placed; and this fact suggests once more the oft-repeated inquiry whether something of the same kind cannot be carried out in England.

The difficulties would be much greater, and there is little doubt that this mode of care could not be carried out to the same extent as in Scotland. That it is practically non-existent in England leads, however, to the conclusion that this is due to its never having been satisfactorily tried.

The reasons why private care of the poor cannot be carried out have been so often discussed that it is useless to repeat

them, but this report suggests a desire to see a really vigorous and determined attempt at imitation on this side of the border.

In the millennium, when the English Lunacy Commission is strengthened in its medical element, this may, perhaps, be again attempted; at present it is obviously impossible for the three medical commissioners to add to their present work the inspection of a few thousand additional homes.

Hospital and Asylum Training of Mental Nurses.

Discussion has recently arisen in regard to the introduction of hospital-trained nurses into asylums, and the experiment has even been tried of placing them in charge of wards without having had previous experience of the insane. With careful selection and enthusiastic co-operation, this has even worked satisfactorily.

Extraordinary conditions must be carefully excluded in dealing with large ordinary affairs. The question is really whether the ordinary hospital nurse is as good for asylum work as the nurse trained in the asylum. To this question we believe that the majority of medical superintendents would give an emphatic negative.

Attendance on the insane, at its best, demands a much higher quality of intellect and of personal character than is ever required by hospital nursing, and the extent of experience is of much greater value and importance.

The asylum nurse has to deal with the disordered working of the most complex function of life; the hospital nurse is principally concerned with material details of a routine character.

Self-control, alertness, sympathy, patience, cheerfulness, sense of justice, keenness of observation, discrimination, firmness, courage, promptness, initiative, are only a few of the characteristics demanded of a mental nurse; the majority of these qualities may be absent from the hospital nurse without detracting from the efficient performance of her duties.

Whatever may be the actual average of individual education and capability of the two classes at the present time, there can be no doubt that the asylum nurse has scope for a much higher ideal, even if it is rarely attained.

The public and even the profession need to appreciate that although some cases with slight mental symptoms (which are merely epiphenomena) may recover under unskilled nursing, such care may often do infinite harm when there is serious disorder. Many epiphenomenal cases, from want of proper discrimination, are unnecessarily removed from home, and by their recovery encourage the belief that skilled nursing is not needed in mental disorder.

There have been, and no doubt still are, many indifferent mental nurses, but there is a wide gulf between the hospital and the efficient mental nurse.

The high personal qualities demanded of asylum nurses, which are too frequently passed over as a matter of course, cannot be too forcibly and publicly insisted on, both to overcome the prejudice that survives from a time when asylum keepers were untrained and uneducated, and to draw to the service people of a higher grade.

Lunacy Prophecy.

A contemporary reports a Detroit "doctor and scientist," "after a careful investigation of existing conditions," as asserting that "260 years hence everyone in the United States will be insane." The population by that time will amount to a few hundred millions, so that this prophecy affords an opening for much speculation. Imagination paints the General Paralytic Progressive Party contesting with the chronically Hallucinated Conservative faction.

Religion would certainly be the province of an epileptic priesthood, with many melancholic devotees.

Paranoia would add interest to philosophy, while confusional cases would probably revel in metaphysics.

Literature and science would be the province of the idiot *savants*, whilst the labour of the community would no doubt fall to the dements.

Similar predictions were no doubt made some fifty years ago in regard to criminality, but fortunately they are not being fulfilled. Eternal hope suggests that perhaps lunacy may not continue to progress by leaps and bounds, and that three centuries hence America may not be more mad than England at the time of Hamlet.

Part II.—Reviews.

The Fifty-sixth Report of the Commissioners in Lunacy, June, 1902.

APART from the points raised by a consideration of the statistical tables, the following are among the more important topics we notice touched upon in the current report.

Fees from Improper Sources received by Relieving Officers for the Certification of Pauper Lunatics.—In view of certain instances of this having come to their knowledge, the Commissioners publish a circular letter from the Secretary of State to Clerks to the Justices for Petty Sessional Divisions, drawing the latter's notice to the intention of certain sections of the Act.

The Re-classification as Private Patients of those admitted into Asylums as Paupers.—Allusion is made to the interpretation of the law, that where there is ground for believing a pauper patient in an asylum to be possessed of sufficient property to maintain him as a private patient, he should be at once re-classified as such. The Commissioners express their appreciation of the present position so created, and are considering if any, and what, amendment of the law could be introduced into a new Lunacy Bill with a view to its improvement.

We would suggest that on the grounds of equity, before a patient is adjudged a proper person to be classified on the private list, it should be proved that his means can refund not only the cost of his maintenance, but contribute to the rate of the upkeep of the fabric of the asylum, and for any payments still due in regard to the original cost incurred in building the asylum. In this connection it would be very desirable to substitute the word "rate-paid" for "pauper."

Provision and Enlargement of Asylum Cemeteries.—It is pointed out that a recent change in the law makes it necessary now to obtain the approval of the Local Government Board before the Secretary of State can give his consent as required by the Lunacy Act.

Examination at Police Courts of Patients for purposes of Certification.—It appears there are still some thirty-one places where this objectionable practice is still more or less in vogue. The Commissioners enumerate them, and rightly again animadvert on the continuance of such a custom.

County and Borough Asylums.

The number of these at the time of writing the report had by the opening of the new asylum for West Ham reached eighty. Some few years ago the Board published a supplementary Blue Book containing the plans of several of the most recent asylums. If it is not practicable to include in their Annual Report lithographic plans of any asylums opened during the previous year, we feel assured that the regular appearance of such a supplement, say every five years, would be very welcome.

The condition and management of these institutions are stated to continue almost without exception to be highly satisfactory. The patients' dietary, particularly the mode of serving of the meals, is the main point in which room for improvement is most commonly noticed.

Post-mortem Examinations.—The names of seven asylums in which such has been held in every case of death are quoted. These asylums are certainly to be congratulated on their success in these highly necessary examinations, but their being thus signalled out is a little unfair towards several others, whose zeal in this respect was not a whit less, but who were unable to attain such completely satisfactory figures, owing to the deceased patients' friends lodging an emphatic embargo against any autopsy being held. How far this objection could be legally maintained is a point upon which we should like to see an authoritative expression of opinion.

Following upon a statement of the proportion of deaths in which a *post-mortem* examination was held, is commonly a statement as to the number, if any, of coroners' inquests. We would here venture to deprecate such a statement as "It is satisfactory to record that since the last visit of our colleagues, more than nineteen months ago, no coroner's inquest has been held, . . ." which we read in the report of one of the county asylums. In our opinion there is an element of danger in such a remark; the obtaining of satisfactory verdicts deserves congratulation rather than the occurrence or absence of inquests.

Zymotic Diseases.—Those of which instances are reported are influenza, scarlet fever, erysipelas, diphtheria, enteric, tuberculosis, dysentery, and diarrhoea. The last two are the only ones which call for notice here, and in none can the case-incidence with any advantage be quoted, owing to the variation of the interval between the Commissioners' visits.

Dysentery.—The returns justify a statement that the mortality from colitis, enteritis, and diarrhoea is a growing one. Comparing the returns for 1892 and 1901, the proportion of "dysenteric" deaths to deaths from all causes has rather more than doubled itself, whether estimated by a reference to all the asylums or to only those from which "dysenteric" deaths were reported. In order to gauge more definitely the extent to which these diseases are prevalent in asylums, the Commissioners have initiated a plan, based upon the scheme adopted by the London asylums, to ensure the registration and the half-yearly notification of all cases of diarrhoea amongst staff and patients. We are very sanguine that this may pave the way to more drastic prophylactic measures. We understand that a somewhat similar registration of all cases of tuberculosis also exists in the London asylums. That this will ere long receive general adoption we earnestly hope.

Tuberculosis in the year 1901 accounted for 1215 of the deaths in the county and borough asylums, which is 15·8 *per cent.* of the total deaths from all causes. It is not quite clear whether these figures and those with reference to dysentery are taken from the table of deaths in Appendix A (Table XIV), in the compilation of which it is permissible to assign only one cause of death in each case, or from the statutory notices of death sent to the Commissioners; the latter would, of course, give much more complete and accurate figures.

The Weekly Maintenance Rate shows the marked advance of 11d. a

head per week on the weekly rate for the year ending March 31st, 1900. This would appear to be mainly due to a general all-round rise in contract prices, but especially to the great increase in the price of coal.

Registered Hospitals.

The Commissioners emphasise the importance of the functions these perform, and repeat their regret that there are no signs of the urgent need of greater accommodation for educated persons of small means being met by public philanthropy. They are fourteen in number, and on the 1st January, 1902, there were 2535 patients and 87 voluntary boarders therein.

Institutions for Idiots.

These are stated to continue maintained in a generally satisfactory condition, despite the unsafe position of the law regarding them.

State and Criminal Institutions. Metropolitan and Provincial Licensed Houses. Single Patients. Lunatics in Workhouses.

The remarks made under these headings do not call for comment here.

Statistical Tables.

Table I gives the number on the first day of the year of all lunatics of whom the Commissioners had cognizance and their distribution, differentiating also between private, pauper, and criminal patients. These figures are given at intervals of ten years from 1859 to 1889, and for each of the years 1893 to 1902 inclusive.

Table II deals with the same years and gives the ratio per 10,000 of all notified lunatics (again differentiating them into private, pauper, and criminal) to the whole population estimated to the middle of the year, and in the last column the number of persons in the whole population to each lunatic.

The former table shows that on January 1st, 1902, the Board had official knowledge of 110,713 lunatics, 45·5 *per cent.* of whom were of the male sex. In 1869 the corresponding total was 53,177, which in the last thirty-three years has therefore rather more than doubled itself. Such a statement has, of course, no sociological value until the figures are expressed in terms of the whole population. It is, however, of some interest to work out the different rates at which this increase has proceeded. It thus appears that the number of lunatics on January 1st, 1859, was 36,762, and had increased to 53,177 on January 1st, 1869, at an annual average rate of 4·4 *per cent.*; between 1869 and 1879 the average rate of increase was 3·1 *per cent.*; and 2 *per cent.* between 1879 and 1889. For the years between January 1st, 1893, and January 1st, 1902, the annual rates of increase have respectively been 2·2, 2·5, 2·1, 2·5, 2·9, 2·6, 2·9, 1·4, 1·2, and 2·6 *per cent.*, giving an annual average rate of increase for the last decade of 2·6 *per cent.* The reader is naturally struck by the particularly low rates during the years 1899 and

1900. There are several factors which would have to be examined before any reliable explanation could be arrived at. The time spent in so doing would, however, to a considerable extent be thrown away, owing to the fact that the above figures merely represent a census of insane population on a given day in the year, instead of daily averages. If a column expressing the latter could be added to Table I, the value of this table from a statistician's point of view would be immensely increased. As a matter of fact Table IV does give the daily averages for most of the distributing columns, omitting, however, those "in workhouses" and those "residing with relatives or others."

Similarly, if it could be found possible to calculate Table II from figures expressing a daily average instead of a census, its results would be much more convincing. As it stands, it indicates a present ratio of 33'55 lunatics to 10,000 of the whole population, as compared with 18'67 in 1859; or, expressed in terms of the number of sane persons to every lunatic, there are now 298 compared with 536 in 1859. How far these figures would require to be amended, if calculated on daily averages, it is impossible to say without the data; but looking forward to Table IV, and working out the annual rate of increase *per cent.* on each year's figures, the following are the results:—4'1, 2'1, 2'7, 4, 3'2, 3'5, 2'8, 1'5, and 3'1, which suggests a curiously greater degree of fluctuation in the rate. There can be no doubt, however, that, as the Commissioners point out, the advance in the ratio has been almost entirely in the pauper class; indeed, the ratio in the private class seems almost stationary. They suggest that possibly more insane of the better social classes are now treated privately without notification to the Board.

Table III is an extremely important and valuable one. It gives the *admissions*, classifying them into private, pauper, and criminal, into institutions for lunatics (except idiot establishments) for the same years as Tables I and II, rightly omitting from them transfers and admissions due to lapsed orders, and sets forth the ratio of these per 10,000 to the whole population. It shows that the total admissions in 1901 were 20,769, being 6'4 per 10,000 total population, to which amount the ratio has advanced from 5'83 in ten years, and from 4'71, which was the ratio in 1869.

The question that at once presents itself is whether this growing ratio means that insanity on the whole is increasing. There are several other explanations which would require to be borne in mind before admitting such an unpleasant one. For instance, a fall in the number of persons in the general population below the age of fifteen, during which period insanity is uncommon, other conditions remaining unchanged, would bring about a rise in the ratio; and conversely the ratio would equally tend to rise were there an increase in the general population of persons at an age-period which is specially prolific in cases of mental breakdown. Or again, an explanation for an increased ratio would be forthcoming were it found that it was a growing practice to certify and send into asylums cases which in former years were nursed at home or allowed to remain in workhouses; we have here, of course, in our minds senile cases, and we are familiar with the frequent wail of superintendents that their asylums are being made a receptacle for such in an alarmingly growing manner. These considerations show the necessity—well enough

known to most of us—of having the means to compare the number of our cases, divided according to age-periods. Such is at our disposal in Table XX, which is divided into eight age-periods, quinquennial between 15 and 35, decennial above 35. It deals with the admissions by means of a yearly average during five years. The table in the present report refers to the years 1896 to 1900 inclusive, and it is very instructive to compare the ratios for its eight age-periods with those in the same table in the 1899 report, which has reference to the years 1893 to 1897 inclusive. This comparison shows that under 15 years of age, and from 15 to 19, the ratio was stationary; that in each of the periods 20 to 24, and 25 to 34, there was an advance in the ratio of 0.1; while in the periods 35 to 44, 45 to 54, 55 to 64, and upwards of 65, the advances were respectively 0.6, 0.8, 0.9, and 1.1. But these figures require still further sifting, for the ratios themselves vary widely in the different age-periods, from 0.2 under 15 to 14.3 in the 65 and upwards column; so that the above advances must, for purposes of comparison, be worked out as percentages, and will then read: 1.5, 1.0, 4.8, 6.2, 7.2, and 8.3. In other words, in the period 20 to 24 the ratio advanced only 1.5 *per cent.*, as against 8.3 *per cent.* in the case of those 65 and upwards. So far, then, it would seem that the senile period *is* the one in which the advance in the ratio has been most noticeable; but it is impossible from the data at our command to say whether this is due to an increase in the number of cases that really *require* asylum treatment, or to a tendency to alter and enlarge the definition of this type.

There remains an appreciable advance in the ratio demanding consideration in the periods 35 to 44 and 45 to 54—periods that are, in truth, of no small importance, for it is probably during them that life's stress and struggle press most severely, and we cannot afford to lightly pass over any apparent rise in the proportion of insanity occurring during them. It has been stated by some that general paralysis is much more prevalent than formerly, and, as these two periods yield more than twice as many cases of this disease than all the other six combined, we at once have at hand a very ready explanation. It probably, however, must be discarded, for, were it the real one, we should expect the male sex to supply considerably the greater share of the advance in the ratio. Such, however, is not the case; indeed, as regards the chief period, 35 to 44, the very opposite prevails. An increase in these periods in the number of "not first attack" cases would account for the advance in the ratio without implying an actual increase in the proportion of *persons* becoming insane. Unfortunately there is no table in which "first attack" and "not first attack" cases are arranged separately according to age, so that this last hypothesis must remain such.

This division of admissions into "first attack" and "not first attack" cases we regard from the point of view of the vital statistician as highly important. Since 1898 the Commissioners have included in Table III a column expressing the ratio (per 10,000) of first admissions to the general population. During 1901 it stood at 5.31, as against 6.4, the already quoted ratio of the total admissions. So strongly do we feel the value of this division that we would venture to urge that it be adopted in all such statistics dealing with admissions, as age, cause, duration of malady, occupation, etc. And, indeed, with regard also to

recoveries, we believe that a similar separation of them into the same two classes would prove a valuable reform.

The recovery rate, expressed in three terms, is given in Tables V and VIII. Based on the number of admissions, it was 37·27 *per cent.* lower than the averages for the ten years 1892 to 1902. We cannot see any practical advantage in the methods of calculating recovery percentages on either the total number under treatment or the daily average number resident, and do not feel that anything is to be gained by quoting the figures.

As a matter of fact no one can feel very satisfied with the foremost mentioned, and at present the accepted, mode of expressing the recovery rate, in that the percentage is based on the admissions of the *current* year, while many of the recoveries refer to the preceding year, and many of the current year's admissions will not recover until the succeeding year. It is a pity the Commissioners' tables do not include one corresponding to Table IV of the Medico-Psychological Association. It is a tedious one to compile, and, as at present found in asylum annual reports, is rendered valueless by the necessary inclusion of transfers; but, compiled by the Commissioners upon the statutory notices of admission and discharge furnished to them, the table would become decidedly valuable. At present the Blue Book affords us no means of finding how many of the admissions notified to the Commissioners in any given year have by now recovered.

The death-rate, expressed in two ways, is shown in Tables VI, VII, and VIII. Calculated on the average number resident, it was 9·77 *per cent.* and 7·65 *per cent.* in terms of the total number under treatment. Both these numbers are 0·37 less than the corresponding ones for 1900. The Commissioners point out an important diminution in the death-rate during the past thirty years, and are sanguine that in partial explanation of this may be held the better nursing in, and the improved sanitary conditions of, asylums.

Causes of Insanity.—We share with the Commissioners considerable diffidence in drawing any conclusions from this table. That such should be necessary is exceedingly unfortunate, for its importance obviously cannot be over-estimated. No doubt this is partly explicable by the fact that in compiling it, personal equation comes more strongly into force than in any other table. Take, for instance, venereal disease (syphilis): it is an assigned cause in 3 *per cent.* of the 9230 male admissions, of whom 11·5 *per cent.* are stated to be general paralytics. Most of us to-day will agree that, if looked for, evidence or history of syphilis can be found in at least 50 *per cent.* of the cases of general paralysis, so that, on these considerations alone, the above percentage of 3 must be much below the mark. And this can only be so because either the evidences of the disease have been overlooked, or because the recorder did not happen to *think* it was actually a *cause*. It should be clearly understood that its presence ought to be recorded, leaving to a subsequent study of the figures the decision as to its causal relation.

The Report concludes with an allusion to the deep loss the Board has sustained in the death of Mr. J. D. Cleaton. He had been a member thereof for thirty-seven years.

Forty-fourth Annual Report of the General Board of Commissioners in Lunacy for Scotland, 1902.

The number of people coming for the first time under the official cognizance of the Lunacy Authorities in the United Kingdom in 1901 was 22,922. This, taken as an index of the amount of occurring lunacy of the country, represents a distinct step in the backward direction when compared with immediately preceding years. It means that there has been a percentage increase of fresh cases of mental breakdown amounting to 4·96, as compared with 0·94 in 1900 and 1·39 in 1899, the average annual increase of population meanwhile being approximately 1 *per cent.* In 1900 the increase was under what it would have been if the proportion to population had remained the same; in 1901 the increase is out of all proportion to the increase of population. The average daily number of fresh cases, which in 1898 was 58, in 1889 59, and in 1900 60, rose to 63 in 1901. There must be some reason for the fact that 1901 had, as compared with 1900, three more fresh lunatics added every day to the official list.

In reviewing the Report for 1900 the opinion was expressed that the existence of the danger which was then threatening the Empire had been productive of an increased mental stability and a stiffening of the moral character, but that that improvement was not likely to be permanent, and the returns of the year under review appear to support the correctness of that prognostication. "Jeshurun waxed fat and kicked" is just as true now as it was in Mosaic times. No sooner is the imperial security assured than self-restraint becomes loosened and mental stability diminished. This throwing-off of restraint makes itself felt in many ways and through all ranks of society. Staid, sober citizens, business men, members of the Stock Exchange, and wearers of silk hats go for the time being clean "off their heads;" there are "Mafekings" and peace rejoicings; London's stock of champagne is drained in one single night; "Peace" meetings are broken up in riot and bloodshed. If such is the conduct of the usually orderly and law-abiding section of society, what can be expected from others? The instability of the unstable is heightened; the criminality of the criminal is increased. Law, order, and sanity cease for the time being to be characteristics, and that too while war is still to be waged for another half-year.

It might, with some show of reason, be held that these alarmist views are contradicted by the facts related in the Scottish Lunacy Report. In England, whose population increases in nearly the same ratio as that of Scotland, the percentage increase of first admissions in 1901 is 6·44; and in Ireland, where there is an annual decrease of 0·5 *per cent.* in the population, these have increased 1·66 *per cent.*; while in Scotland the total number is less by 9, or 0·33 *per cent.*, than in 1900. This, however, may be looked upon rather as an illustration of a difference between the Scottish character and that of England and Ireland, a difference which expresses itself by a lesser readiness to be betrayed into effervescent emotionalism by passing events, however exciting. The steadying effects of the temporarily trying time through which the Empire has been passing were longer in making themselves felt in

Scotland, and the reaction which has set in elsewhere has not yet manifested itself. The returns of 1902 will in all likelihood witness to this.

No special reference is made by the Commissioners to this, from the sociological point of view, really the most important feature of the year, *viz.*, the actual diminution in the total numbers admitted for the first time to the official register in 1901. The proportion of these per 100,000 of population rose from 52·6 in 1900 to 55·4 in 1901 for the whole United Kingdom; in England from 50·2 to 53·1; in Ireland from 61·9 to 67·4; while in Scotland there is, by contrast, a fall from 60·8 to 59·2.

The statistics relating to general paralysis as a cause of death in establishments reveal "a new and startling proportion," and reflect "seriously upon the social health of a large section of the city population," not only in Edinburgh, but throughout the whole of industrial Scotland, which provided three fourths of the whole number of victims of this disease. The following table is so sufficiently eloquent of a most startlingly retrogressive tendency on the part of the Scottish race as to call for no further comment.

Percentage increase or decrease (1) of total deaths, exclusive of general paralysis; (2) of deaths due to general paralysis in 1901, as compared with 1900.

	Total deaths exclusive of general paralysis.			Deaths from general paralysis.		
	M.	F.	T.	M.	F.	T.
England .	- 4·9 ...	- 1·1 ...	- 2·9 ...	+ 16·5 ...	- 2·9 ...	+ 12·0
Scotland .	- 14·7 ...	- 4·4 ...	- 9·2 ...	+ 41·6 ...	+ 63·1 ...	+ 45·2
Ireland .	+ 9·6 ...	- 15·8 ...	- 3·2 ...	+ 13·3 ...	0·0 ...	+ 13·0

With regard to the "boarding-out" system, the figures for the year indicate a continued tendency towards accumulation of pauper patients in establishments, with a corresponding reduction in the numbers accommodated in private dwellings. This decrease takes place mostly in the case of those who are under the care of related guardians. While the total number of pauper lunatics shows an increase of 2·4 *per cent.*, those in establishments have risen 3·4 *per cent.* The decrease in the number in private dwellings amounts to 1 *per cent.*, those with relations diminishing 3·3 *per cent.*, and those with strangers only 0·3 *per cent.* A possible explanation for this tendency, in addition to those adduced by the Commissioners, may be found in an improvement in the conditions of life, an improvement indicated by a fall in the pauper rate per 100,000 of population equivalent to 1 *per cent.*, which has taken place during the year.

Considerable prominence is given to questions of medical treatment and to the nursing of the insane, and frequent reference is made to the "bed treatment" of acute cases. This system, which meets with approval on the part of the Commissioners, but as to whose merits, as a hard and fast rule, there is by no means unanimity of opinion, can hardly be regarded as a modern discovery. In one asylum, it is recorded, "it has for many years been used as one of the ordinary forms of treatment;" and is it not recorded that Christian's relations, thinking that "some frenzy distemper had got into his head, . . . with all haste

they got him to bed"? The spirit of progressiveness is very active in the Scottish asylums; some might, perhaps, think too much so, and that there is some risk of the sense of proportion getting lost. One looks for indication of some result of a practical kind, some evidence that the condition of the patients, for whose benefit all these improvements are devised, is materially bettered. Perhaps it is unjust to judge of their merits so soon, but it is not encouraging, after having high hopes raised, to turn to the hard facts of the statistical table and to find that the abolition of the single room, the supervision by the hospital-trained nurse of the tried and experienced asylum attendant, the bed treatment, and the like, have not resulted, so far, in any marked improvement either in the recovery rate or the death-rate. The former was 38·6 *per cent.* of admissions in Royal and district asylums in 1901, as compared with 38·3 in the preceding year, 37·3 in the quinquenniad ending 1899, and 38·6 in the preceding quinquenniad; and an analysis of Table X of Appendix A reveals the fact that, though there has been a decrease in the total deaths in 1901 amounting to 3·6 *per cent.*, there have been increases under those very headings in which improved methods of treatment and nursing might be expected to give other results. The increases we refer to are those of deaths within a year of admission, which are 8·9 *per cent.*; those from maniacal and melancholic exhaustion, which are 21·7 *per cent.*; and those from suicides and accidents, which are 17·6 *per cent.* more than in 1900. The desirability of securing and retaining the services of suitable asylum attendants, upon whom depend so largely the welfare and happiness of the patients, is strongly emphasised by the Commissioners; and apparently this service is being rendered more attractive, for the changes among the staff, though still numerous, are considerably fewer than in the previous year. Voluntary resignations were 12 *per cent.* less, but dismissals showed an increase of 16 *per cent.*, and the number of those who absconded rose from nine to twenty-nine. In this regard, it is difficult to reconcile certain statements with certain facts relating to one asylum, of which it is reported that the nursing arrangements "possess many novel and interesting features worthy of record," and which, it is said, "have been found to be most beneficial, both as to the patients and staff." If beneficial to the staff, how is it that the reports covering a period of twenty-four months out of the past three years record the resignation of 107 and the dismissal of 22, the corresponding numbers for three years ending 1895 being only 63 and 6? And with all these frequent changes, how can it be argued that there is any benefit to the patients? Novel, certainly, all will admit; savouring a trifle too much of the revolutionary, not a few will be disposed to think.

One of the features of the Scottish Reports is the manifest evidence which they bear of a far keener interest on the part of the Commissioners in the lunacy affairs of that country than is found in the English Reports. The reason for this is not far to seek. It is not humanly possible for the English Commissioners to devote more time and attention to the requirements of their office when the proportion of registered lunatics per Medical Commissioner is somewhere about 37,000, the corresponding proportion in Scotland being 4000. Reading over the reports of visits to individual asylums, one cannot help

being struck by the kindly, almost personal interest which is evinced by the Commissioners, by the hearty acknowledgment of zealous work on the part of officials, especially the Medical Superintendents, and by the encouraging and helpful suggestions which are offered, features certainly not conspicuous in the Reports of their English brethren. And yet, how well could it be otherwise? And is not the argument strongly in favour of one, at least, of Sir William Gowers' contentions, *viz.*, an increase in the number of English Medical Commissioners? If four Medical Commissioners are considered requisite for the 16,000 registered insane in Scotland, manifestly it is unjust that the interest and welfare of the 110,000 in England should be entrusted to a Board on which the Medical Commissioners number only three. If the 11,000 lunatics resident in the twenty-six Royal, District, and Parochial Asylums in Scotland get ninety-four days in a twelvemonth devoted to their visitation, their 77,100 fellows in the eighty English County and Borough Asylums are unfairly dealt with in having only somewhere about 100 days devoted to their visitation, even taking into allowance that they have the benefit of the Legal as well as the Medical Commissioner.

In the matter of the management of the lunacy affairs of their country the Scottish Commissioners have always been to the forefront. Only on one point had we been waiting and hoping that once more the initiative would have been taken by them, and that is the treatment of the whole subject of lunacy on modern and rational lines, such as is being attempted in recent times in the case of cancer and tuberculosis, and which has done so much in the past in eradicating such diseases as used to be prolific causes of mortality, *viz.*, prevention. The credit for this must be awarded to our own Association, which at last has made a tentative suggestion to deal on these lines with one particular form of insanity, that which is caused by syphilis. Perhaps, at the most, not more than one tenth part of lunacy can be attributed to this cause; but, small as the matter is, it is a beginning, and the great point gained is the recognition that the rational method of treatment is the preventative. Why restrict the "liberty" of the subject only in the matter of syphilis? The principle once admitted is capable of much wider application. If the Legislature, which is (too fondly, we think) being looked to more and more in these days, is to be relied upon to devise means to ensure that men and women shall not run the risk of syphilitic infection and the subsequent possibility of general paralysis and its congeners, why should it not, quite as logically, enact measures to ensure absence of mental instability in the generations that are yet to come? To what end all the compilation of statistical tables by the Commissioners and asylum authorities, if not to indicate the conditions under which lunacy is found to prevail, and the directions in which the remedy for this admittedly saddest of all human ills is to be sought? Leaving the pain and misery on one side, the financial outlay cannot be regarded as other than an unremunerative investment, simply a penalty (the magnitude of which has been very forcibly brought home to at least one lunacy authority in Scotland just lately) that Society has to pay for having insane members, and the remedy lies not that way. If there is one subject upon which the public do want enlightenment, it is the subject of insanity. That public interest can be aroused was illustrated by

the amount of attention which Sir William Gowers' address at the November meeting of our Association evoked, not only in the medical world, but throughout the whole lay press from *The Times* even unto *Modern Society*. Neither the Boards of Lunacy, nor our own Association, nor asylum committees, do what might be done educatively in this direction. A good deal might, we feel, be done in the direction of popularising these, to most people, driest of Blue Books, the Lunacy Reports. The thoughtful lay public has been induced to evince a real interest in such a matter as crime, and if the lunacy returns were modelled on lines similar to those, for example, on that subject and on the latest Irish Census Reports, with illustrative charts, maps, and diagrams, they would appeal more strongly, and so be productive of good in the long run.

Fifty-first Report of the Inspectors of Lunatics (Ireland) for the Year ending December 31st, 1901.

Once in ten years the census returns afford the opportunity of correcting lunacy statistics, based on merely estimated population, by a reference to the actual figures as obtained by the census. This decennial revision prevents any material errors in the percentage computations; but of course such computations for the intervening years between successive census enumerations can only be regarded as approximately correct, although perhaps too much exception is sometimes taken to the accuracy of such calculations. Some estimate of the amount of lunacy is desirable, and, as it is impossible to have a census every year, for the greater number of years we must be content with merely approximate results.

If, for a moment, we turn to the figures of the Census Commissioners, we find that there was an absolute increase in the total number of lunatics and idiots in Ireland of 3862 during the past decade, which is equivalent to a rise of 18·2 *per cent.* But as there was a decrease in population of 5·2 *per cent.* in the same period, this figure understates the relative amount of lunacy for the two census years. From the figures of the census report the following table can be constructed:

Year.	Population.	Total number of lunatics and idiots.	Ratio per 100,000 population.	Increase <i>per cent.</i> per decade.
1851	6,552,385	9,950	152	—
1861	5,768,967	14,098	243	60
1871	5,412,377	16,505	305	25
1881	5,174,836	18,413	356	16·7
1891	4,704,750	21,188	450	26·5
1901	4,458,775	25,050	561	24·6

We have, therefore, to face the unpleasant fact that the lunacy ratio in this country has increased during the past decade by close on 25 *per*

cent., and that there is now one insane person for every 170 sane in Ireland. In the previous decade the increase was slightly over this, being 26.5 *per cent.* So far, therefore, from there being any indication of an absolute decrease of lunacy, we can hardly even say that there is any material reduction in the rate of its increase, although there may be a small crumb of comfort in the fact that the 2 *per cent.* difference in the percentage increase of the last two decades is on the right side.

If we analyse the figures representing the aggregate amount of insanity we find that, while lunacy has so largely increased, there has been a notable diminution in the number of idiots, this class of the insane numbering less by 1027 than in 1891. There are few things more puzzling than the fluctuations in the recorded number of idiots in successive decades, as will be seen from the following table of the figures of the last six decades :

Year.	At large.	In asylums.	In prisons.	In workhouses.	Total.
1851	3562	202	13	1129	4906
1861	5675	403	21	934	7033
1871	5147	410	2	1183	6742
1881	4548	1896	—	2195	8639
1891	4077	996	—	1170	6243
1901	3272	763	—	1181	5216

The chief anomaly in this table is the decade 1871–1881. According to the census returns, there was a total increase of 1897 idiots ; the number in asylums having, by one amazing bound, more than quadrupled itself, rising from 410 to 1896, while those in workhouses had nearly doubled, increasing from 1183 to 2195. It seems almost incredible that the number of idiots for this particular decennium should so vastly exceed that of any other antecedent or subsequent period. During the following decade, 1881–1891, the number of idiots in asylums and workhouses dropped to nearly one half. Another fact revealed by these figures may, perhaps, help to throw a little light on this rather mysterious circumstance. During the same decade, 1871–1881, there was practically no increase in the number of lunatics (a rise of eleven only), an incident wholly contrary to the experience of both previous decades, for in each of the two preceding decades they had increased by about 2000, and in each of the two succeeding ones there has been an increase of about 5000. We have, then, this curious condition of things :—Lunacy virtually stationary during a particular decade ; idiocy presenting a huge increase, followed in the next decade by a reduction to about one half. The only possible explanation which suggests itself is that a large number of insane patients were admitted to asylums and workhouses as idiots, and on a revised classification were transferred to the category of lunatics.

The number of idiots, however, seems to be steadily diminishing, as in the course of the past twenty years they have decreased by 3423, and in the last decade alone by 1027. This fact is consonant with another, that the number of insane under the age of fifteen has largely and con-

tinuously diminished during each of the last four decades, *viz.*, from 650 in 1861 to 385 in 1901 (*see* Census Report, 1901, Table 128, p. 472). As there are very few cases of acquired lunacy under the age of fifteen, it is a perfectly warrantable conclusion that the number of congenital idiots is steadily decreasing—a ray of light through the gloom.

Coming to the Inspectors' Report, we find at the opening the usual summary of the number and distribution of the insane under care in establishments, which is as follows :

	On 1st January, 1901.			On 1st January, 1902.		
	Males.	Females.	Total.	Males.	Females.	Total.
In district asylums . . .	8,912	7,492	16,404	9,133	7,747	16,880
„ central asylum, Dundrum .	140	22	162	146	24	170
„ private asylums . . .	325	384	709	323	409	732
„ workhouses . . .	1,590	2,215	3,805	1,560	2,186	3,746
Single chancery patients in unlicensed houses	47	42	89	55	47	102
Total . . .	11,014	10,155	21,169	11,217	10,413	21,630

As shown here, there was a total increase of 461 during the year, as compared with 306 in the previous year. But the increase is 33 below the average for the past ten years, *viz.*, 494. The increase in district asylums was 476, while in workhouses there was a decrease of 59. In the year 1880 67 *per cent.* of the insane under care were in asylums, 27 *per cent.* in workhouses, and 6 *per cent.* in private asylums; in 1901 the corresponding ratios were 78, 17, and 5 *per cent.*, showing that there has been a gradual depletion of workhouse patients by their transference to asylums. Until this process is completed we cannot look for any finality in the “increase of lunacy,” using the term in at any rate one of its most common applications as denoting the aggregate of insane confined in asylums. As bearing upon this question, it is to be noted that with one exception no attempt has been made to establish auxiliary asylums for the reception of harmless and incurable lunatics, as provided for by the seventy-sixth section of the recent Act. The exception is Youghal, where disused industrial school buildings are being converted into an auxiliary asylum in connection with the Cork District Asylum. According to the Act, for patients of this class an allowance of 2s. per head per week will be made from the Local Taxation Account, or half the capitation grant given in district asylums. Possibly this fact may account for the reluctance of County Councils to avail themselves of the provisions of the seventy-sixth section. And it is a question whether for this, as well as for other reasons, it would not be a preferable procedure to build annexes to existing asylums suitable for the reception of such patients under the ninth section of the Act, when the full contribution of 4s. per week could be claimed. By a poor

country like Ireland a reduction of the maintenance allowance of one half is looked upon as a serious matter, and, judging by the apathy hitherto shown on this head, it is very doubtful if this seventy-sixth section will ever bear the fruit which the framers of the Act no doubt expected.

In the table on page 15, giving the proportion of insane per 100,000 of estimated population, there seems no reason why in the census years 1881, 1891, and 1901 the actual and not the estimated population should not be given. In a foot-note, variations in some of the figures in this table from those in previous similar tables are explained by stating that "the population is estimated officially for the years between those in which the census is taken, and is afterwards subject to revision." As the estimated population is still given for the above-mentioned census years, one is tempted to ask—Where is the revision?

The admissions in 1901 were 3572, of which 2821 were first admissions and 751 recurrent cases. The table on page 19 gives the admission figures since 1880, and if we take the last four quinquennia and calculate the rate of increase, we get the following result :

Period ending	Average 1st admissions.	Increase per cent.	Average re-admissions.	Increase per cent.	Average Total.	Increase per cent.
1886	2182	—	554	—	2736	—
1891	2312	5·9	636	14·8	2949	7·7
1896	2468	6·7	764	20·1	3232	9·5
1901	2735	10·8	549	28·1 *	3484	7·7

* Decrease.

From which it appears that there has been a large percentage increase during the past five years in first admissions, this being 10·8 as compared with 6·7 in the previous quinquennium ; whereas there has been a very large decrease in the number of re-admissions, 28·1 *per cent.*, as compared with an increase of 20·1 in the five years preceding. The percentage increase in total admissions was reduced from 9·5 to 7·7 in the same period. It is not improbable that a good deal of the increase in first admissions is due to transfers from workhouses, which, as a table on page 13 shows, have increased in the past ten years from a ratio to total admissions of 12·66 in 1891 to 20·13 in 1901 ; or, if we take first admissions alone, the ratio is higher still for 1901, *viz.*, 21·3.

On the whole a study of these figures is not illuminating. He would be a bold theorist who would attempt to found any deductions upon such data. Mark, learn, and inwardly digest them as we may, they are baffling and inscrutable, and give us no clue to the future. As well interrogate the Sphinx of the Libyan desert.

And yet we are fain to cry "How long?" Can nothing be done to stay the advance of the destroyer? As a matter of fact, very little is done, except indirectly. The great temperance movement tends in the long run to reduce insanity by limiting one of its most potent causes. Education ought to be a powerful lever, if properly used, in the furtherance of the same great object. And if a tithe of the energy which has

lately been expended in heated altercations by rival religious and political partisans on the subject of education had been applied to the more useful and practical aim of ensuring that in every school physiology, and even elementary psychology, should be regularly taught by competent instructors, a great step in advance would have been made towards safeguarding the sanity of future generations. It is only by instilling into the minds of children from their earliest years—and this is quite possible and feasible—the great leading facts and principles of life, and health, and sanity, that they can learn how to avoid the pitfalls which they will meet in after years, and be enabled to exercise an intelligent and well-balanced control over their appetites, passions, faculties, and powers. And in this power of control lies the antidote to insanity. *Si jeunesse savait*; but it doesn't, and that's the pity of it.

The recoveries show a percentage of 36·3 on the admissions, not quite as favourable a record as that of the previous year. The average recovery rate for the past four years was 36·8 *per cent.* as compared with 38·4 for the previous five years, a considerable drop. Records of recovery are, it is to be feared, not altogether reliable, as they depend more or less on the views, as regards what constitutes recovery, of individual medical superintendents. And it is certain that a large number of the cases returned as recovered are not permanent recoveries; 64·6, which is the recovery rate for males in Kilkenny Asylum, seems inordinately high, judging from the average experience, and it would be interesting to learn how many of these patients continued perfectly well after a period of, say, six months from their discharge.

The average death-rate was 7·5, which is exactly the average of the past five years. The death-rate in asylums fluctuates within very narrow limits. One fourth of the deaths (313 out of 1257) were due to phthisis. It is probable that this does not differ much from what obtains outside asylums in Ireland, if the age at death were taken into consideration; but, unfortunately, a really useful table giving the mortality from each disease at successive age-periods has for some inscrutable reason been discontinued since 1900, and now only the average age at death is given, which teaches nothing, if it is not actually misleading. As regards the general population, where there are large numbers to work upon, the average age at death may embody a truth and so be utilised; but in asylums only a comparatively few patients die from any one disease, and averages computed on meagre data of this kind are sure to be unreliable. To take an extreme but quite possible case:—Suppose of four deaths due to pneumonia that two occurred at the age of twenty-five, and two at seventy-five; the average age at death here would be fifty, and, as not one of the four even approximates to that figure, it conveys an absolutely false impression. It would be a decided advantage if this table giving the mortality at successive age-periods could be restored.

Four deaths occurred from suicide, seven from misadventure, and two from homicide, the casualties being nearly double those of the previous year. Two of the suicides were by hanging. In one case the patient suspended himself from one of the water-pipes in a sanitary annex which “were fixed contrary to all the canons of asylum construction inasmuch as they afforded an absolutely perfect facility for suicide.

No doubt ; but how many facilities for suicide exist, and must exist, in all asylums ? Every bedstead, every door or door-handle, every window-shutter is a potential gallows ; and the very next case, where the patient suspended himself from the window-shutter, largely discounts the value of the above criticism. The fact is that precautions of a merely mechanical nature are only an infinitesimal protection. A determined suicide will find facilities anywhere and everywhere. There is only one certain precaution against suicide—vigilance ; tireless, unceasing vigilance. An insufficient staff is probably a more prolific source of untoward incidents in asylums than all other causes put together, and in most of the cases recorded the inspectors seem to have been of the same opinion.

As regards zymotic disease, the amount of enteric fever and dysentery is scarcely creditable to the asylums in which they occurred. In Richmond asylum five out of eleven patients attacked died from dysentery, and in Castlebar nineteen out of forty-nine—an unusually high mortality. It is not always easy to trace out the *fons et origo* of these maladies. In Castlebar, however, it was sufficiently obvious, and was evidently the sewage of the asylum, which discharges into a marsh close at hand, which in wet seasons becomes a lake, emitting mephitic and poisonous exhalations. This state of things, it is expected, will be remedied before long. Castlebar is also stated by the inspectors to be greatly overcrowded, having 610 patients with legitimate accommodation for only 419. Additional accommodation is about to be provided. But overcrowding in Irish asylums appears to be the rule rather than the exception, for in no less than ten asylums it seems to have reached an acute stage. With respect to two of these, Monaghan and Sligo, the inspectors comment in strong terms. In the case of Monaghan, they have “each year called the attention of the committee to the very disgraceful condition of overcrowding, but so far without avail ;” and as regards Sligo, when the committee eventually moved in the matter, and decided to enlarge the asylum, “the County Councils of Leitrim and Sligo refused to supply the funds for carrying out the work.” The ninth section of the Act (sub-sec. 1) empowers the Lord Lieutenant, in the case of councils refusing to do their duty (in providing sufficient accommodation for the lunatic poor), to enforce compliance on the recalcitrant bodies. The cases just mentioned would seem to be instances which urgently call for His Excellency’s interference.

The total expenditure for the maintenance of pauper lunatics in district asylums for the year under review was £427,660 9s. 3d., being less by £7843 2s. 11d. than in the previous year, although the daily average was greater by 513. The reduction is attributed by the inspectors mainly to the fall in prices of provisions, etc. The net cost per head was £24 9s. 11d., which also shows a reduction of £1 3s. 7d. per patient.

In private patients there was an increase of twenty-three, as compared with ten in the preceding year, but the admissions numbered only one more. Of latter years the admissions into Irish private asylums have increased somewhat, but it is doubtful whether this indicates any increase in insanity amongst the better classes. It may only mean that a smaller proportion than formerly are sent to English and Scottish

asylums. A general improvement to a very material extent, judging by the inspectors' reports, has been steadily in progress for some years past in nearly all these institutions, and in some of the leading private asylums in Ireland patients are now probably just as comfortably located as they would be in any asylum.

The condition of the insane in workhouses continues to be anything but satisfactory. Some few improvements have been effected in some unions, but until the one radical improvement which is needed is carried out, namely, the transference of every insane inmate to institutions properly equipped for such cases, their condition, it is to be feared, is likely to be nothing else than deplorable, and a discredit, if not a disgrace, to the country which permits it to exist.

Old and New Investigations upon the Brain [Alte und neue Untersuchungen ueber das Gehirn]. Archiv für Psychiatrie, Band xxxiv, Heft 1, und Band xxxv, Hefte 2 und 3.

In three elaborate articles, filling 181 pages, Professor Hitzig reviews the methods and theory of the examination of the functions of the brain practised during the last thirty years, and the inferences to be deduced therefrom. He observes that the original experiments of Fritsch and Hitzig still furnish the only facts which are beyond dispute. He then considers the experiments by removing portions of the brain, as practised by Goltz, Loeb, Luciani, and Tonnini. It is easy to excite motions of one limb or of the facial muscles by the application of the continued current; but it is only with great difficulty that we can induce loss of motor power of one paw in an animal through the operative removal of a circumscribed portion of the cortex. After the operation both limbs on the same side are generally affected. Hitzig shows, by detailing five observations, how often such experiments are vitiated by secondary effusions of blood or softening, which injure the neighbouring and subjoining part of the brain. Even in the removal of definite portions the slightest invasion of the mechanism of a contiguous region can alter the whole results of the experiment.

Hitzig points out that Goltz began by stating that every portion of the cortex had an equivalent function, while in 1879 he observed that animals after destruction of both parietal lobules showed a greater loss of sensibility than those in which there was an equal removal of the occipital lobe. On the other hand, a lesion of the occipital lobe entails a more lasting injury to vision. Goltz, however, qualifies this admission by the following sentence:—"From my experiments I have arrived at the conclusion that every section of the cortex of the brain shares the function from which come willing, perception, representation, and thought. Every section, independently of the others, is connected with all the voluntary muscles, and stands also in connection with all the sensory nerves of the body."

Hitzig remarks that this means that every section of the cortex of the brain has an equivalent function with every other section. Probably Goltz holds that although every part of the cortex has a connection with

every motor nerve and with every sensory nerve, nevertheless the connection is not equal, as some portions of the cortex have more connection with some nerves than with other nerves. Hitzig reminds us that the methods and theories of Goltz are not yet abandoned ; his follower Loeb continues his experiments in the same line, and even takes back his concessions. This physiologist found that in his vivisections of the brain the prescribed injury to function did not follow while contrary results occurred. He states that in the animals experimented upon, when there were scanty bleeding and healing by the first intention, no injury to vision was observed. Loeb confesses, however, that sometimes hemiamblyopia did occur, which he attributes to especial irritability of the brain.

Luciani and Tamburini, experimenting on dogs, found that loss of motor power and impairment of sensibility followed extirpation of the motor region, and that there was also disturbance of vision, which in time passed away. The sensory motor zone thus indicated extended from the apex of the frontal lobe and went over the so-called visual region of Munk. Luciani and Seppilli found that injury to sight followed extirpation of all parts of the cortex with the exception of the under and inner sides of the hemisphere, which have been little investigated. In this estimate of the great extent of the cortex, of which removal is followed by injury to the vision, these Italian physiologists agree with Goltz.

They hold that the apprehension of seen objects is realised in the middle portion of the cortex cerebri. There are separate spheres for vision, hearing, smelling, and sensori-motor impressions, besides a common area which lies within Munk's visual region ; here there is a fusion of the special areas, a centre of centres. The extirpation of this region in the brain of the dog, while it especially injures vision, also affects hearing, smell, and touch.

Tonnini, who has made a large number of experiments, found that in the dog injury to the motor powers was more apt to follow frontal lesions, but might also follow sigmo-prefrontal, sigmo-parietal, and even parietal lesions. The sigmoid region is not the only motor zone ; the parietal area in its anterior half has at least an equal share in the hemiplegia following such vivisections. Tonnini denies that the occipital and temporal regions have specific functions ; but he admits that the central parietal region of the hemispheres has more the function of a visual and auditory centre, and perhaps of a complicated sensory centre. Tonnini comes to the general conclusion that identical operations do not always give the same results, while different operations, even in adjoining regions, may give a group of symptoms of the same character.

Altogether, the results of the experiments of the Italians are difficult to seize, and throw dubiety upon defined localisations in the brains of animals.

Dr. Hitzig thinks that the reason why his first experiments with electrical excitations on the cortex have withstood all criticism is that he was careful to use only the weakest galvanic currents which could bring on motor reaction : when stronger currents are employed combined actions of several muscles ensue. Hitzig could only succeed in causing contraction of single muscles with the induced current when a weak

one was used. If the strength was increased, combined actions of groups of muscles always followed. With galvanic excitation applied to one hemisphere Hitzig has produced contractions of all the muscles on both sides. He is convinced that almost all the muscles of the body are represented in both hemispheres, though in unequal proportion.

Dr. Hitzig combats at great length the explanation advanced by Goltz and Loeb that the brain is an organ of inhibition, and that the results obtained by removal of portions of the cortex are due to the withdrawing lower parts of the encephalon from its regulating influence. To say that because injury to a certain portion of the brain is followed by inhibition of another part, therefore the normal function of the first organ is to inhibit, seems an assumption. At any rate, they ground their theory upon their observations of the slow renewal of the power of limbs which at first seemed to be paralysed after removal of parts of the motor zone in the cortex. Goltz and Loeb hold that the common motions, such as walking and running in dogs, are functions of the subcortical ganglia, and cannot be destroyed by lesions of the cerebrum. Goltz observed that dogs, after great lesions to the fore-brain, show an increased impulse to move about, and assume an excited, angry, and aggressive character; and dogs which have received great injury to the hind brain become quiet, soft, and harmless, even when they have previously been vicious. Thus these physiologists hold that as the anterior portions of the brain are anatomically connected with the motor apparatus, they serve to inhibit the outflow of energy into the muscles; when they are destroyed the inhibiting power ceases. When muscular motions are excited through electric stimuli applied to the cortex, the result is due to the indirect transmission of the excitation to the "segmental ganglia." On the other hand, the posterior portion of the cerebrum are more connected with the organs of the senses. They serve to limit the excitations coming from the organs of the senses, so that the animal can direct muscular motions to a certain object. If these portions of the brain are destroyed the excitations pass into the motor apparatus and inhibit it in its activity. It seems to me that the word *Hemmung* may be sometimes translated inhibition, at other times prohibition. Loeb denies that there are any centres in the cerebrum. The exclusive function of the brain is to furnish an associated memory. The loss of this memory follows after loss of the hemispheres. Animals thus mutilated learn nothing. What we call consciousness is only an accompaniment of the activity of the associating memory. The nervous system is a regulating mechanism like the escapement of a clock, but it is also a conducting medium which enables the peripheral organs to work with precision. Much of what we to-day call functions of the brain are really functions of the peripheral organs.

Hitzig combats Loeb's neurological psychology both by reasoning and experiments. He does not admit the general correctness of the disposition of the dogs from which such sweeping inferences are drawn. He asks for further explanations about the areas on the cortex from which irritations can be propagated with such precision to the "segmental ganglia" below. Loeb calls these places of anastomosis or junction "Einmündungstellen." Hitzig observes that these are the first places in which the axis-cylinders are developed, and experiments have shown

how they are affected by secondary degenerations, so it is difficult to deny that they are important areas.

Hitzig makes use of inhibition so far as to admit that sensory lower ganglia may be put out of function for a time by injuries not directly applied to them, and that the terminations of centripetal nerves may be temporally inhibited in their function by injuries to certain parts of the cortex. More inquiry is needed as to the conditions under which these inhibitions take place.

At the end of the first article Hitzig indicates the present state of our knowledge, and what there is still to do. He holds the localisation in the hemisphere as conclusively proved, but that there are questions concerning the sensori-motor and visual functions which are still to be resolved. Further research is needed to decide the issue between Hitzig himself and the Italian inquirers about the localisation of certain gyri in relation to single muscles and muscular motions. The functions of the frontal lobe and the central representation of the muscles of the trunk should be put beyond all doubt. There are still gaps in our knowledge about the innervation from the cortex to the extremities; still more about the function of other cortical areas—for example, that of the facial nerve. Here, also, new methods of inquiry are demanded.

The sensory functions are certainly impaired through lesions of the motor zone in proportion to the extent of the injury. It is probable that this zone serves for the formation of representation of sensation, though it is not likely that this is the only region which is used for that end. When portions of the cortex are removed the impaired motor and sensory functions are never completely restored. Sometimes it is difficult to find out these residual deficiencies, especially where the injury to the cortex is not considerable. The apparent restitution is partly owing to the disappearance of associated symptoms, and partly to additional power given to the opposite hemisphere, and also to increased conduction in the tract of the tegmentum.

Hitzig thinks that the area of the cortex which stands in relation to vision has yet to be defined, and that a correct discrimination between cortical lesions and indirect subcortical impairments of function has yet to be made. Hitzig considers it highly probable that in the spinal and cerebellar, perhaps also in the centres of the middle brain, there is a gradual elaboration of movements and sensations therewith connected, through which representations of movements of a lower order are formed. These are recognised in consciousness as performed movements, without the processes through which they are executed being perceived by the mind. Hitzig does not recognise sensory, visual, auditory, or other such spheres, but only representations in which images of these centres enter into consciousness.

In the third paper Hitzig considers the relations of the cortex and the subcortical ganglia in the visual function of the dog. Here there are three views to dispose of: that of Munk, who assigns the posterior half of the cortex in the dog's brain to the functions of seeing and hearing; the view of Goltz, who assigns the loss of sight after operations to inhibitions of the lower ganglia; and the observations of the Italian school, who, though they allow that the injury to vision is the direct result of lesions to the cortex, assert that this can be brought about by

lesions affecting the greater part of the convexity of the brain. This is confirmed by the experiments of Exner and Paneth cited in the article.

Hitzig's own views are supported by twenty-two observations of experiments on dogs, which are given in detail and illustrated by wood-cuts. He found that the simple exposure of the pia is followed by marked injury to the convolutions lying below, and that there is often implication of those contiguous. The uncovering of the membrane over the motor zone led not only to motor impairments in the extremities, but also, save in one case, to impairment of vision, and in all the cases to impairment of the reflex movement of the eyelids. The uncovering of the pia over the occipital lobe led in all cases to disturbances of vision and of the reflexes of the eyelids, but not to injury to the motor powers. The symptoms following such operations are of the same character as those following extirpations of corresponding areas of the cortex. The alterations in the nerve-tissues found after death explain these symptoms without supposing any accidental injuries or mistakes in the conduction of the experiment. Hitzig observes that surgeons opening the vault of the cranium should be careful to replace the dura over the part. He thinks that he has proved by his numerous experiments that marked impairment of vision may be induced by a lesion to other regions of the cortex than those assigned by Munk as the visual area. Dr. Hitzig promises, in a future paper, to treat about the relations of the other regions of the cortex to the sense of vision.

The articles which we have gone through are of value as showing us not only what we know about the brain functions, but also as indicating on what points we require further knowledge. Here no better guide could be found than Professor Hitzig, who, while he has led the way in investigations of the functions of the cortex, has been ever cautious that his assent should not go beyond his evidence. It is almost comical to read his complaint that Haeckel, in a recent report of our present knowledge of the origin of the human race, gives Goltz and Munk as the founders of our knowledge of the localisation of the brain without alluding to Hitzig.

The Varieties of Religious Experience: a Study in Human Nature.

Being the Gifford Lectures on Natural Religion, delivered at Edinburgh in 1901-2 by WILLIAM JAMES, LL.D., etc. London, 1902: Longmans. Royal octavo, pp. 534.

On the principle that it is more blessed to give than to receive, the professor of philosophy at Harvard shows a pardonable pride in having been called across the Atlantic to give lectures to an audience in the Old World. No Gifford lecturer has hitherto succeeded in attracting so large and so appreciative an audience. Though Dr. James's practice in lecturing, his genial voice, and clear pronunciation contributed to this success, the book under review will no doubt be read with interest both in Europe and America. Deeply versed in the lore of philosophy, but avoiding pedantic terms, and refusing to help his diction through other men's phrases, his sentences are permeated by thought and a rare felicity of expression. He has that quality which the Romans called

disertus. Wary of belief, yet fair in statement, weighing the very dust in the balance, the professor considers the religious faculty in all its manifestations. Avoiding that sort of generalisation which includes too much of the opinions of the author, James seeks to base his remarks upon particular examples of religious experience as exhibited in autobiographies, the letters of devout persons, and the lives of the saints. With a good eye to effect he gives extracts from the sacred literature of the Brahmins and Buddhists, and the Mussulman Sufis, with the same philosophical equanimity as from the confessions of Catholic saints and pious Protestants. This is sure to be distasteful to some people, who will demur to accepting various metals under one religious stamp. Dr. James himself observes that his concrete examples are drawn from extreme expressions of the religious temperament.

There are chapters upon the reality of the unseen, the religion of healthy-mindedness, the sick soul, the divided self and the process of its unification, conversion, saintliness and its value, mysticism, and the philosophy of religion.

We shall confine our criticism mainly to the passages in which the author deals with those manifestations of the religious faculty which are associated with mental derangement. It cannot be said that the professor, like too many of his colleagues, is unwilling to learn what physicians can teach psychologists from the study of abnormal mental action. We should rather say that he is too ready to admit some overhasty theories, and to found conclusions on unstable premises in these fields of inquiry.

An unwary reader may take up from Dr. James that it is a current belief amongst medical men that genius is a neurosis, as Moreau long ago advanced, though James himself refuses to adopt this view. "There is," he writes, "of course no special affinity between crankiness as such and superior intellect, for most psychopaths have feeble intellects, and superior intellects have more commonly a normal nervous system." He cites Lombroso and Mr. Nisbet, the author of a book which puts "the insanity of genius" in a popular form. Mr. Nisbet was not a medical man, and knew so little of medicine that he imagined that intermittent fever was a nervous disease; and Dr. James might have told his readers that Lombroso's theories have been attacked and, as we think, refuted.

The learned author slides too rapidly past the studies which have been made on the neuropathic symptoms of some leaders of great religious movements. "The medical materialists," he writes, "are effective with their talk of pathological origin only so long as supernatural origin is pleaded by the other side, and nothing but the argument from origin is under discussion." Yet, in spite of all Dr. James can say, with those who believe in a supernatural revelation the question of origin is the key to the position. If the claimant to divine illumination exhibit symptoms frequently associated with insane delusions, most people will think that the credibility of his message is seriously injured. In vain does Dr. James urge that the psychopathic temperament, with its intensity, its fondness for metaphysical speculation, and its mysticism, is favourable to the perception of religious truth. A lunatic may deliver a message correctly, yet his testimony is always subject to suspicion,

especially in matters on which one can have no experience. In reality Dr. James gives away revealed religion. He lays down that a religion is to be judged "from its fruits, and not from its roots;" that is, he considers the efficacy of religious faiths in promoting worldly order and prosperity, and in leading their votaries to follow reason and virtue in their earthly lives. But this is a criterion which the Christian, the Brahmin, and the Mohammedan will all reject. The fruits which they promise have to be gathered in an unseen world.

He observes that each religion at the outset must have satisfied the aspirations and moral wants of its votaries, and when the standard of morality or intelligence had risen above the old faith, that it sunk into discredit. He claims for "our instincts and our common sense the right of disbelieving peremptorily in certain types of deity." "When we cease to admire or approve what the definition of a deity implies, we end by deeming that deity incredible." Yet, if such a deity exist, he needs not our approval. "The monarchical type of sovereignty was," the American author tells us, "so ineradicably planted in the mind of our own forefathers, that a dose of cruelty and arbitrariness in their deity seems positively to have been required by their imagination. . . . But to-day we abhor the very notion of eternal suffering inflicted, and the arbitrary dealing out of salvation and damnation to selected individuals."

Pascal, in his *Pensées*, admits that the conception that unbaptised children should be consigned to eternal torments is contrary to our miserable ideas of justice; but the reason of the great geometrician gave way under the terror of being himself subjected to the same torments if he should disbelieve in the dogma taught by his Church. It was not till historical inquiry loosened men's faith that their minds began to recoil against this article of belief.

In his appreciation of the value of saintliness Dr. James tells us that Stoic, Christian, and Buddhist saints are practically indistinguishable. In estimating the effects of different religions upon the community it ought to be held in mind that religion is but one of many powerful factors, and thus its effects are difficult to isolate. In India we have the Mussulman and the Hindu living together. Some people who have passed many years in the country think that the Mohammedan is better than the Hindu, others the contrary, while many think the native Christians worse than either. Here we have three very distinct religions under much the same conditions.

Dr. James startled his Edinburgh audience by proclaiming his faith in the mind-cure movement in America. "The blind have been made to see, the halt to walk, lifelong invalids have had their health restored, the moral fruits have been no less remarkable." Fatigue, pain, and paralysis have been annulled by impressing on the mind that these do not affect the soul, which, if it chooses, becomes supreme. The instances of cure cited by the author are far from convincing. Going along the road a man sprained his right ankle, when he recollected that "there is nothing but God; all life comes from Him perfectly. I cannot be sprained or hurt." He never felt it any more, and walked two miles that day. We are inclined to believe that this person gave his tendons a painful stretch without any rupture, and the effect naturally passed quickly away. This is a thing which often happens. The next case is

a woman who felt pains, nausea, headache, and faintness, and went to bed believing that she would have influenza. She felt a dominant idea that all would be well, and when she woke in the morning she was well. The other two cases given in the appendix do not seem any more convincing. We learn from medical sources in the States of the vagaries of Mrs. Eddy and her followers, and regret that so distinguished a professor should have given them any countenance by classifying them under the heading of "healthy-mindedness." He defends the mind-cure by the power of suggestion in some cases of disease. This has, of course, been long admitted; from Pechlin to Hack Tuke many books have been written upon the power of imagination and confidence in a cure. These have been successful principally in functional nervous diseases and in rheumatism; but such mental influences are varying and uncertain, and can be rarely utilised in the treatment of disease.

In the course of his speculations Dr. James builds much upon the subliminal consciousness of Myers, a modified form of the unconscious cerebration of Carpenter. There are agents both physical and mental which change our moods, prompt our thoughts, raise and depress our spirits, increase our mental power and render us ready to receive this or that set of ideas, and these influences act insensibly. There does not, however, seem sufficient proof that any process of active thought or exertion can be performed without consciousness. Some writers talk of persons being unconscious in the active states of hypnotism or sleep-walking. So far from this being the case consciousness is intensified and narrowed. In these abnormal conditions consciousness persists more or less separated from memory, and those who are sparing of their mental analysis may, on looking back, easily believe that consciousness had not persisted because it had left no record in the mind. Dr. James seeks to support his subliminal consciousness by the feats of hypnotisers who claim that they can sometimes get their subjects to execute commands a month or so after without their counting the days or taking any note of the lapse of time, and without their knowing wherefore they are performing the prescribed action. This has, on the face of it, a strong air of absurdity. We dare say that Dr. James, in the course of his wide reading, will get writers on hypnotism to support all he wants, and more than he wants; but he might have mentioned that on this point they are not agreed. Bernheim, in his well-known book on *Suggestive Therapeutics*, totally rejects the idea of any unconscious mechanism in suggestion *à longue échéance*, and he is supported in this view by Krafft-Ebing, Delboeuf, and Liegeois, who have all had much practice in hypnotism.

It can scarcely be expected that the reader will find nothing to disagree with in the course of the book, for it must be kept in mind that Dr. James deals with much disputed questions. Nevertheless his book has a pleasing stamp of originality. His great erudition is kept in rule by a mature knowledge of human nature. If he takes up a sceptical attitude, it is not because he prefers it, but because he will not voluntarily eliminate opposing considerations. Sometimes the views in one chapter seem out of accord with those in another, and he has again and again to warn his readers to wait for his conclusions. In the search for truth one does not sail upon a sea

always smooth ; there are currents and eddies. Sometimes he may seem to veer ; but he is willing to take the reader into the harbour, if there be a harbour. Dr. James is decidedly on the spiritualistic side. He is inclined to believe in telepathy and messages from the dead, though not convinced. While admitting the reign of law in the material world, he shows that prayer has its own sphere of action. He is ready to recognise good in most religions, and thinks that men will never agree to have the same creed, considering their various antecedents, circumstances, tastes, and intelligence. One cannot read the book without recognising the enormous force of religious ideas upon the human mind.

WILLIAM W. IRELAND.

Clinical Psychiatry : a Text-book for Students and Physicians, abstracted and adapted from the sixth German edition of Kraepelin's 'Lehrbuch der Psychiatrie.' By A. ROSS DEFENDORF, M.D., Lecturer in Psychiatry in Yale University. New York and London : Macmillan and Co., 1902. Pp. 413. 16 Illustrations. Price 15s. net.

It is not our intention, in this notice, to attempt any review or criticism of Kraepelin's teachings, however tempting such a task may be. His papers in the various Continental psychiatric journals have, from time to time, been abstracted and criticised in the pages of the *Journal of Mental Science*.

Our object is chiefly to point out that there is now available for English readers an excellent translation conveying clearly, concisely, and in a scientific way the principles of Kraepelin's psychiatry, which supplies a hitherto deplorable gap in English and American psychiatric literature. The work is well illustrated.

It is regrettable that, apart from the short abstracts provided in this and a few other journals, foreign teaching and progress in our branch of medical science is so completely neglected.

No asylum should be without its psychiatric library, and this should contain, among others, works conveying the teachings of the various important schools and clinics which are now scattered throughout the world. This means a series of faithful translations of monographs and text-books similar to the one we now strongly recommend to our readers.

We hope this recent example will be more largely followed in the future, and that, before long, there will appear a number of works which will bring within the reach of English readers the main teaching of the more important psychiatric centres.

J. R. LORD.

L'Art et la Médecine. Par le Dr. PAUL RICHER. One vol. 4to, pp. 562 ; 354 illustrations (reproductions of works of art). Price 30 f. Paris : Gauthier-Magmer et Cie., 1902.

This book certainly contains a wonderful collection of the works of art related to medicine, the majority being very careful reproductions of the original paintings, with some representations of statuary, etc.

The demoniacs occupy nearly a third of the whole work, and are profusely illustrated from the earliest ages of Christian art and from paintings by renowned masters. The hysterical attitudes are, in many instances, strikingly accurate; but it is noteworthy that Dr. Richer considers Michael Angelo to have been more unsuccessful in his delineations of this form of disorder than many less eminent artists. The description of these appearances as depicted appears sometimes to require a certain amount of imagination in the beholder, and probably some observers would perceive epileptic appearances rather than hysteria.

The grotesque chapter is less satisfactory, but that devoted to idiots and dwarfs is specially interesting to alienists. The examples of microcephaly are particularly good.

Chapters are also devoted to the blind, the lepers, etc., but these yield in interest to that devoted to the sick and their doctors, which illustrate many obsolete medicinal methods. The quacks do not escape, although very few examples of the operation for removing "stones from the head," so often painted by the Dutch school, are given here.

The work is, indeed, a monument of labour and love of the subject, and Dr. Richer is to be congratulated on the successful issue of his arduous undertaking, and on having secured such great success in the production of the illustrations.

The Making of Citizens: a Study in Comparative Education. By R. E. HUGHES, M.A.(Oxon.), B.Sc.(Lond.). The Contemporary Science Series. Newcastle: Waller, Scott & Co., 1902. Octavo, pp. 405. Price 6s.

The author claims to have written this book for general readers. In attempting to place before them a complete and accurate account of the present position of education in the four principal countries of the world, the author uses the published reports and statistics in illustration of the system pursued in each country, and he certainly is successful in giving a satisfactorily clear idea of the systems and their contrasts.

The part of the book that is specially interesting to the alienist is that relating to the education of defective children, which is somewhat unsatisfactorily brief and condensed. There is, however, a fairly full description of the modes of education of the deaf mutes.

The tables of statistics on all subjects relating to the schools of the four countries (England, France, Germany, and America) are very valuable and interesting, as are the other facts brought together in the book. They, however, offer little subject for criticism beyond the recognition of the clear and instructive method of their arrangement.

With what is perhaps his most vital conclusion, *viz.*, that we must be "content to go on lagging behind the Teuton in intellectual capacity," and trust "to our own special gifts," a very distinct difference of opinion must be expressed. With developmental education, in place of the brain-stunting methods now in vogue, we believe that the Englishman would be not only the equal but the superior of the German.

The book is a valuable addition to the literature of the education question.

Part III.—Epitome.

Progress of Psychiatry in 1902.

AMERICA.

By DR. H. M. BANNISTER.

THE past year has not been notable for any special events in American psychiatry, though the usual amount of activity has existed. There has been no retrogression, and signs of a better future ahead as regards political control of charitable institutions have appeared in quarters where they are most welcome. In Illinois, for example, where for ten years past politicians have controlled the institutions, recent events have made reform in this regard a political issue, and both parties are, so to speak, tumbling over each other in their zeal to utilise it to their own advantage. The scandal that excited this was not abuse of patients or bad financial management, for neither of these has been proven, but the assessment of employes for political purposes, which has at last aroused the public conscience. The outcome can hardly fail to be good, and we may hope at least for a better state of affairs than existed even before the politicians took control. It is a slow work educating the public as to the political neutrality of hospitals for the insane, but it is being done, and the prospect is that they will before very long be as free from the abuses of partisan politics in Illinois as in any of the older states of the Union. I have spoken of this matter in previous letters, but it is right that I mention it again, for it is the chief fault of our public institutions, and the one that is more than everything else responsible for their failings.

The meeting of the American Medico-Psychological Association took place this year in Montreal, and, as might have been expected, was a success socially as well as in the character of papers presented and their discussion. The medical organisations representing the specialists here recognise no boundaries as between Canada and the United States, and the Association, therefore, is no exception. The "Chauvinism" in medicine, that formed the subject of Dr. Osler's address before the Canadian Medical Association at Montreal a little later, is certainly not evidenced by the medical specialists, however it may be with the general practitioners. It would be invidious, perhaps, to speak of any one of the papers read as specially excelling in interest or scientific value; they were all apparently well received, and aroused the usual interesting discussions. It is possibly worth noting that not all were from medical men; one was contributed by a prominent Methodist clergyman, Dr. J. M. Buckley, who, however, is an honorary member of the Association, and has written extensively on related subjects, faith cures, hypnotism, etc., and takes an active interest in the insane and defective classes generally. The choice of Dr. Blumer as President of the Association was, I believe, a most satisfactory one to all, and

a deserved tribute to one who has been among the foremost in every movement for the advancement of scientific mental medicine in this country during the past fifteen years, since he succeeded the late Dr. John P. Gray in the editorship of the Association journal.

Speaking of faith cures and religious abnormalities generally, I might here mention that the Canadian Government has a puzzling problem in the Russian Doukhobors, who settled in Assiniboia. A large portion of these, incited by some recent prophet, concluded that it was not only wrong to keep domestic animals in subjection, but to utilise their products in any way. They therefore turned their cattle loose, burned their shoes and woollen garments, and set out on a crusade to convert the world, inadequately clothed and provisioned. The local government has had to forcibly interfere, and though the Doukhobors are non-combatants as well as vegetarians in their principles, they have exerted the most active type of passive resistance, and have only been controlled by the use, it is reported, of some necessarily pretty rough handling and some broken bones. It seems hardly probable that their insane fanaticism can long be kept up, and affecting as it does whole communities, or nearly whole communities, it is a sort of anachronism in the beginning of the twentieth century. They are an industrious and generally law-abiding people, but ignorant and obstinate to the last degree, and the Canadian authorities doubtless wish they were off their hands.

I saw an allusion not long since in an English book to "Christian Science and other American Soothsayers," and take the opportunity of here making a disclaimer of the American origin of all these recent aberrations except Eddyism. That we shall have to acknowledge as starting in this country; it is a sort of successor to the homœopathic cult, which is on the wane. The others, Dowieism, etc., are exotics like the Doukhobor fanaticism. We are responsible for a good many things that we do not boast of, but it is not fair to credit us with more than our due.

In my letter last year I spoke of the removal of Dr. Ohlmacher from the position of pathologist at the Ohio Epileptic Asylum. Within the past few months he has been recalled, this time to take full charge of the institution. While this adds executive duties to his work, it will not, I think, prevent his carrying out the researches he was formerly engaged in, and will give him still wider opportunities. The appointment of Dr. Meyer as Director of the New York State Pathological Institute is another good one. He does not, I think, need any introduction to your readers, and we may look for good work from the Institute, which is hereafter to have a teaching function for hospital assistants, as well as serve as a research laboratory. In both of these directions he may be expected to make it a success.

The movement for extra asylum treatment of the acutely insane in special wards of general hospitals is progressing, and in a number of institutions such wards have been provided, or are being planned. It has been strongly advocated by Dr. Peterson, State Commissioner in Lunacy in New York, as well as by other well-known authorities, and it seems probable that these psychopathic hospitals and wards will rapidly multiply in the near future. They have their limitations, but within

these their usefulness cannot be questioned. It seems to the writer that sometimes too much is expected; it is a very common claim in this country that acute insanity can be better treated at home than in asylums, and this error helps the common belief that general hospital treatment also must necessarily be better for the insane. They will, nevertheless, have a very useful function, and whatever ratio of insanity they cure will be a relief to our already overcrowded institutions.

There have been fortunately but few deaths among the leading or older alienists of the country during the past year. Dr. R. M. Bucke, of London, Ontario, was a loss that is felt. He was a striking figure in the profession, and a man of note in a literary as well as a medical point of view. Dr. J. T. Eskridge, of Colorado, though not strictly a practical alienist, was a close student of insanity as well as the leading neurologist of his section, and in every sense a most valuable man. Dr. Geo. A. Shurtlaff, the pioneer asylum superintendent of California, is another notable man who has passed away during the present year.

FRANCE.

By DR. RENÉ SEMELAIGNE.

On the Self-accusing Insane.

At the "Congrès des Médecins Aliénistes et Neurologistes" Dr. Ernest Dupré, of Paris, gave a lecture on the self-accusing insane, studied from a medico-legal point of view. He made first an ætiological and clinical study of the idea of self-accusation; and second, a medico-legal study of the conditions created by these patients, and the duties of magistrates and of the physicians commissioned to report upon their mental condition.

In psychiatry, one includes not only those who confess themselves guilty of a peculiar crime, but also those who have general ideas of incapacity, unworthiness, guiltiness, and remorse; but in medical jurisprudence the self-accusing insane person is one who denounces himself as guilty of an offence or a crime, relating all the particulars of the case, such as place, time, and methods, and believes himself to be liable to legal punishment.

Ideas of self-accusation may be observed in various morbid states as follow:—Melancholic states; states of debility, want of balance, obsession, paranoia, degeneracy; oneiric states in toxic psychoses, such as alcoholism, pyrexias, etc.; delirious states of neuroses (epilepsy, hysteria); demented states (general paralysis, senility, organic encephalopathy).

1. *Self-accusation in Melancholic States.*—At first the melancholic merely express general ideas of incapacity, humility, and unworthiness. Then the patient, being a prey to an inexplicable moral grief, looks for a more precise interpretation of his culpability, and, as the conviction of culpability is secondary to moral grief, the feeling of remorse creates the notion of default. Many melancholiacs do not go beyond this state of diffuse culpability; so they are more culprits than

self-accusing. They may confess any fault with which one should happen to charge them. Such delusions of self-accusation are general, indeterminate, and Platonic. But in that soil sometimes springs up and grows an idea of peculiar culpability (a hyperbolic magnifying of small peccadillos; a slanderous interpretation of an act of no importance; an auto-suggestion of culpability concerning disasters or crimes of the time).

2. *Self-accusation in some States of Mental Degeneration.*—A self-accusing degenerate is more active in his delirium of culpability than a self-accusing melancholiac, and he willingly denounces himself to the magistrates. Dr. Dupré successively studies the ideas of self-accusation of degenerates suffering from—(a) a mental debility and want of balance; (b) obsessions; (c) some varieties of paranoia, acute or chronic, primary or secondary, which seem to be transitions from general mental degeneration to chronic systematic insanity.

While a self-accusing melancholiac is sincere, anxious, and repentant, a self-accusing *débile* is lucid, a liar, and indifferent or vainglorious. Such a patient does not present true delusions of culpability, and the lucid self-denouncement does not come from delusion but from moral and intellectual perversions. There is a morbid appetite of vainglory, an instinctive need of a scenic appearance. Whilst all self-accusing melancholiacs seem to be alike, self-accusing degenerates are dissimilar from each other.

One may observe two principal varieties of debilitated degenerates—either intellectual with an infirm mind, or moral with a deficiency of moral sense. The self-accusing intellectual debilitated patients are impulsive or vain. Some patients suffering animal or shameful obsessions may present ideas of self-accusation consecutive to a series of criminal impulsive obsessions; these multiply, and the patient soon questions if he did not really perpetrate the crime. At last he is thoroughly convinced that he is the culprit.

Among the paranoic degenerates who manifest ideas of self-accusation one may observe—(a) self-accusing persecutory melancholiacs; (b) self-accusing persecutory alcoholics; (c) self-accusing primarily deluded patients. The self-accusing persecutory melancholiac associates both delusions of persecution and self-accusation, and such association might be co-existent, subsequent, or alternate. In the one case the melancholic feeling, with its secondary delusions of culpability and self-accusation, inaugurates the disease. By degrees the ideas of persecution make their appearance, which finally prevail and eventually constitute a secondary post-melancholic paranoia.

In another case ideas of persecution primarily appear, and ideas of self-accusation are subsequent. Both delusions might co-exist, alternate, combine, or make their evolution side by side without penetrating each other. Such are the self-accusing persecutory melancholiacs.

In a third case an idea of self-accusation is associated with ideas of persecution. Such patients are not genuine melancholiacs or classical cases of persecution, but hypochondriacal degenerates with obsessions. Hypochondriacal and obsessional preoccupations generally influence misanthropic, distrustful, and timorous minds, which are subject to all varieties of obsession. The insanity of self-accusation is often only

a general hypochondriacal condition, but it sometimes becomes a criminal obsession and is followed by self-denouncement. Among such patients one may observe a persistent wish for surgical interference for the purpose of modifying or repairing genital organs, a tendency to self-mutilation, or attempts at suicide.

In a fourth case both delusions of persecution and self-accusation happen to combine in a soil prepared by alcoholism. Such are the self-accusing persecutory alcoholics.

3. *Self-accusation in Toxic Psychoses.*—All toxic and infectious states create psychical disorders, such as hallucinatory delirium, oneirodynia, mental confusion, etc. Most generally, the type of hallucination and of all secondary disorder is painful, sad, or terrifying. Toxic psychoses bring together all the pathogenic elements capable of creating and increasing ideas of self-accusation. Lasègue used to say that when a man pretends to be a murderer, one might assert, ninety-nine times in a hundred, that he is alcoholic. So, in these cases, alcoholism must always be looked for. Strong and healthy people survive long poisoning, but acting on a degenerated soil, the least intoxication might awake an idea of self-accusation. As a rule that kind of delirium is of a transitory type. At first there are alternations of half-conscious lucidity ; then the phases of delirium lessen, and at length disappear.

Self-accusation of alcoholic origin is principally noticed in psychic or delirious inebriation, and in subacute alcoholic delirium. But it may also be observed in the various combinations of alcoholism and mental degeneracy ; there is a kind of pathological mixture.

Next to alcoholic psychoses, the acute infectious psychoses cause the most numerous cases of self-accusation from a toxic origin. Dr. Dupré reports five observations of self-accusation in typhoid fever.

4. *Self-accusation in Dementia.*—In dementia from a paralytic, organic, or senile origin, ideas of self-accusation occasionally appear. Such ideas are mobile, diffusive, incoherent, absurd, and contradictory ; but sometimes, and especially in the early stages of general paralysis, they present a more systematic appearance.

5. *Self-accusation in Psycho-neuroses.*—Self-accusation may be observed in psychopathic states of a hysterical or epileptic origin. Hysterical patients generally are most suggestible, most prone to hallucinations, amnesic, and vain. They may make false imaginary accusations which are sincere or untrue, or sometimes both together. Such accusations generally have reference to other people, but there are also self-accusations, and that clinical type presents the appearance of lucidity, abundance and precision of all particulars, likelihood of the confessed fault, uniformity of the narration. Such a self-accusation constitutes a special medico-legal type, being nearly always united with a hetero-accusation ; it is a *complicité à deux*. Self-accusation in epilepsy is uncommon. Some patients try to explain the unconscious acts which they have done during their fits.

The interesting work of Dr. Dupré includes a medico-legal study and many observations of cases.

On the Anxious States in Mental Diseases.

According to Dr. Lalanne, director of the private asylum of Castel d'Andorte, in Bordeaux, the disorders which follow anxiety are physical, affective, and intellectual. We may find disorders of general sensibility and motility; also circulatory, respiratory, gastric, and secretory disorders; anomalies of tendencies and feelings concerning the preservation of the individuality and mankind; psychical and cerebral symptoms.

The principal disorders of general and special sensibility are anæsthesias, hyperæsthesias, and paræsthesias. During violent fits of anxiety some patients are capable of severely mutilating their body without sustaining pain. Hyperæsthesia from an emotional origin brings forth hypochondriasis, and a violent irritability of the nervous system. There are perversions of sensibility (heat or cold, shivering), of special senses (chiefly of hearing, sight, feeling). There are disorders of motility, such as asthenia (muscular weakness, general lassitude), contractures, tremor, absence of co-ordination of voluntary movements, disorders of speech; disorders of circulation, such as spasm of the muscles of the heart; respiratory disorders (difficulty in breathing, dyspnoea); digestive disorders (constipation, gastro-intestinal atony, stomach cramps, sometimes diarrhoea); secretory disorders (polyuria, paralysis of bladder, sialorrhoea, absence of salivation, fits of perspiration); affective and intellectual disorders (anxious expectation, obsession).

Anxiety may be observed in many varieties of psychopathies, such as degeneracy, mania, melancholia, *folie à double forme*, melancholia with ideas of persecution, psychoses from intoxication, and even general paralysis. But there are some anxious psychopathies of a special and common type. It is not apparent at first; the patients suffer anxiety during a very long time. That is the primary and predominant sign in its various aspects. Such diseases are always springing up and growing in a pre-existent soil of anxiety. The genuine type is anxious melancholia. Chronic anxious melancholia, in its typical form, presents the following phases:—1. The phase of primitive melancholia, with ideas of unworthiness, guiltiness, ruin, self-accusation. 2. A period of doubt. 3. A melancholic delirium, with ideas of negation, damnation, possession, which all represent an alteration of personality. 4. The delirium ends in a phase of megalomania.

Professor Brissaud, of Paris, insists on the difference between anguish and anxiety. Anguish has a bulbar, and anxiety a cerebral origin; anguish is a physical disorder (sensation of constriction and suffocation), anxiety is a psychical disorder (sensation of indefinite insecurity).

GERMANY.

By DR. J. BRESLER.

At the annual meeting of the Association of German Alienists (held at Munich on April 14th and 15th, 1902), one of the first items of

business was the appointment, at the instance of Professor Hoche, of Friburg, in Baden, of a *statistical committee* to collect information on all occurrences regarding the insane, especially suicides and crimes committed by insane persons, judicial condemnations of the insane and the weak-minded, the admission of sane persons to asylums; in short, all the incidents which go to show the defects of the lunacy law and the need for its reform. In this way it is hoped that they will be in a position to give material help to the State in the framing of new lunacy legislation.

At the same meeting attention was again drawn by Dr. Brosius to the need for the extension of "after-care" societies.

Of general questions which have interested us in the course of the year, I specially mention that of the *suitable size of asylums*, regarding which two opposite views are held. Some maintain that the number of patients should not be more than 600 if the director is to have personal knowledge of all the patients. Others believe that the cost of an asylum for 1000 patients and upwards is much less than that of two asylums for 500 each, and that in large asylums greater independence is secured to the medical superintendents.

The question of abstinence from alcohol in asylums has also been to the fore. Adherents are constantly being gained to the view that alcohol as a beverage should be excluded from asylums, and that it should only be used as a therapeutic agent.

Similarly the problem, "To isolate or not to isolate?" has led to much interesting discussion. The general view is that an absolute prohibition of isolation is not practicable, but that it can be reduced to a minimum; there are asylums in which for many years isolation has been abolished.

In Göttingen a society of Jurists and Alienists (*Vereinigung—Juristisch-Psychiatrische*) has been formed, having as its object a mutual understanding on moot questions of forensic psychiatry. A similar society has existed for several years past in Dresden under the name of the Association of Forensic Psychiatry (*forensisch-psychiatrische Versammlung*); the co-operation of jurists and alienists has had good results here.

Should any of our English colleagues desire a succinct review of lunacy matters in Germany, compiled critically from the official year-books of recent years, I should recommend Dr. Deiter's work, *Stand des deutschen Irrenwesens, 1900–1901* (Halle, published by C. Marhold).

ITALY.

By DR. G. CESARE FERRARI.

The Italian scientific production in the domain of psychiatry has been, in 1902, rich, important, and varied; and although our young alienists spread themselves over the whole field, yet they neglect somewhat the practical side—the application of the theoretical views and conclusions to great questions, such as the hospital treatment of the insane, the overcrowding of the asylums, family care, etc. These

have not yet been settled, but the younger section of alienists will finally, by their enthusiasm, find a solution.

It is not their fault. On one hand, they cannot do very much because, in the committees of the asylums, the medical directors only are heard. On the other hand, the work to be accomplished is so great that many succumb in the struggle. It is necessary, notwithstanding, that they should prepare themselves (and some have already begun) for the task of hospitalisation of the asylum, which humanity and economy may call for to-morrow.

As the greater part of the articles in our journals are sooner or later reviewed in the *Journal of Mental Science*, we shall give simply a bibliographical sketch.

Beginning with Northern Italy, we find at Turin two journals of psychiatry; the *Archivio di Psichiatria, Scienze penali, ed Antropologia criminale*, edited by Lombroso (about 700 pages, 6 fasc., price 16s. per annum), and the *Annali di Freniatria*, directed by Marro (400 pages, 6 fasc., price 10s.).

The *Archivio di Psichiatria* is the real organ of the Italian criminal anthropological school, and it always bears the vigorous imprint of Lombroso. This publication has been in existence for twenty-three years, the present year containing principally anthropological contributions. There are to be noticed a study of Lombroso on the brigand Musolino, an essay of Portigliotti on "The Insane Man of Genius" (Savonarola), the reports of Parnisetti, Audenino, and Frigerio on the subjects already discussed at the last Congress of Amsterdam, of Roncoroni and Sanna Salaris on nervous diseases with alterations of sensibility, etc. etc.

The *Annali di Freniatria* has been in existence for twelve years, and is publishing more especially work on psychiatry and neuropathology, containing contributions by Pellizzi, Tirelli, Martinotti, Arullani, Burzio, and Filippello. Special mention should be made of the remarkable study of the physiologist Dr. Grandis on the physiology of the magnetic field.

Other neurological studies find frequently "lieu et place" in the *Gazzetta della R. Accademia di Medicina di Torino*, but as a rule this journal only publishes abstracts.

From Turin we pass to Reggio Emilia, where we find the *Rivista sperimentale di Freniatria*, of which Tamburini is the editor (1000 pages a year, quarterly, 16s. per annum). This journal has existed for twenty-eight years, and for nearly ten years it has been the official organ of the Society of Italian Alienists. It is on this account that the first number of the present year contains the proceedings of the last Congress of the Society. We must point out that amongst the very fine reports published there will be found the one of Dr. de Sanctis on the subject of the classification of the psychopathies. This report is particularly interesting on account of the important remarks made by the author on the basis which must rule every classification. Respecting the classification detailed and adopted by the Congress, it has all the faults of productions made collectively, but as it is official (at least for some time), and will be used for the Italian statistics, I mention it below.⁽¹⁾ Among other reports of interest are those of de Sanctis and

Colucci on the possible re-education of the weak-minded and of demented, which gave rise to a discussion full of interest, and the report of Prof. Tamburini on the crowding of the asylums.

In the other numbers published this year is an important paper by Dr. Ceni, chief of the studies at the Institute of Psychiatry at Reggio Emilia, on the ætiology of pellagra. He has found as pathogenetic agents of that disease the *Aspergillus fumigatus* and the *A. flavescens*. Dr. Ceni has also tried serum-therapy with encouraging results.⁽²⁾ The lack of space prevents us from mentioning other articles of Tamburini, Badaloni, Brugia, Pizzoli, Patrizi, Cavani, etc. The last number contains only works on neurology of Biancone, Panegrossi, Panichi (of Rome), Pighini (of Parma), Bombicci (of Padua), etc.

At Ferrara, not far from Reggio, was published this year a new journal, *Giornale di Psichiatria clinica e di tecnica manicomiale*, directed by Tambroni (400 pages quarterly, 6s. 6d. per annum). This journal is nearly exclusively written by Cappelletti, d'Ormea, Lambranzi, Muggia, Vedrani, Ferrarini, etc., and the doctors of the asylum of Ferrara; in it we find very remarkable original studies, among which is the historical and critical study of Cappelletti on the two principal systems of the family care, the Belgian and the Scotch. The author concludes in favour of the latter.

Coming to Florence, we find the interesting *Rivista di patologia nervosa e mentale* (600 pages a year, in twelve parts, 15s.), edited by Tanzi. This journal corresponds to the German *Centralblätter*, and is just as useful. We must mention, as being of particular importance this year, the studies of Tanzi on the secondary atrophies, and of Belmondo on yellow fever as predisposing to progressive paralysis. Also works of Lugaro, Obici, Pellizzi, Catola, Camia, Gabbi, Pagano, etc.

In Rome there is only one journal, *Annali dell' Istituto Psichiatrico di Roma*, of which Sciamanna is the director. This journal, which a year ago took the place of *Rivista di neuropatologia e di psichiatria*, is not published periodically. The first volume, of 175 pages with plates, contains many original memoirs by Pardo, Guidi, Cerletti, Pittaluga, all pupils of Professor Sciamanna, director of the Institute of Psychiatry. The psychiatrists and neuropathologists of the asylum of Rome, director Prof. Bonfigli, do not possess a journal of their own, but they are using the *Rivista di Reggio Emilia* and of Florence, and also the *Monatsschrift für Psychiatrie* of Ziehen, etc.

Going further down still, we find two journals of psychiatry in Naples, — *Annali di neurologia*, directed by L. Bianchi, now having reached its twentieth volume; and the *Rivista mensile di psichiatria forense ed antropologia criminale*, directed by Penta, which for five years has appeared every month.

The journal of Bianchi always contains important contributions on microscopical anatomy, on psychopathology, and on psychiatry, written by the students of the clinic, and by the doctors of the asylum of Naples, Colucci, Fragnito, d'Amato, Crispolti, Sciuti. This year there is also an interesting article by Prof. d'Abundo on the experimental atrophies. The bibliographical part is very large.

The *Rivista* of Penta has published this year many interesting contributions. I refer to that by Saporito (d'Aversa) on "Criminality

amongst Soldiers" and one by Angiolella (from Nocera), on "The Phrenosies and the Ethnic Element of Character," full of interesting points.

Still further south than Naples, at Nocera Inferiore, there has been published for eighteen years from the interprovincial asylum itself a journal, *Il Manicomio* (450 pages per annum, in 3 parts, £7 per annum), of which Ventra is the director, assisted by the doctors of the asylum. Del Greco and Angiolella are the principal contributors to this publication, but it contains also some articles from other doctors of Southern Italy.

Finally, in Sicily we find *Il Pisani* (from the name of the celebrated alienist), edited by Salemi Pace and Dotto, director and vice-director respectively of the asylum of Palermo. It appears three times a year, and publishes almost exclusively original works.

Besides these ten journals, which represent a mass of work, many of the asylums publish their own *Bulletin*, and a great number of psychiatric and neuropathological works are found in journals of general medicine. In the *Rivista di filosofia e scienze affini* (Zamorani and Marchesini of Bologna) Prof. Morselli, who is the director of the psychiatric clinic of Genova, publishes every month an account of contemporary philosophy. In the same journal Dr. Del Greco contributed this year an interesting article on "The Elements of Knowledge in the Insane," in which he shows that the alterations of the mind are intimately united with the alterations of personality. Angiolella also contributes "Biological Sciences and Education."

Another article, "An Objective Definition of the Psychical Phenomena," profound and full of originality, by Lugaro of Florence, is found in *Archivio per l'antropologia e l'etnografia* (Prof. Mantegazza), organ of the Anthropological Society of Florence.

This enormous production, of which any nation could justly be proud, makes us regret that a little of this energy is not employed in a more direct way in the amelioration of the condition of the insane. In Italy the number of the insane, which in 1874 was 12,210, has risen in 1893 to 36,931, of whom 28,364 are kept in forty-three asylums. From recent statistics it appears that in these asylums there is an excess of 5000 patients. At the last Congress of the Society of the Italian Alienists, Prof. Tamburini, the President, brought forward these figures, and pleaded for immediate steps to be taken to alleviate this sad state of affairs. He laid stress on the benefits of family colonisation, which he has himself established at Reggio around his asylum, and which has had every success. Dr. Cristiani followed his lead at Lucca, with encouraging results. Alienists must initiate individual systems of family care, and they will be rewarded by their asylums becoming less overcrowded. The population of Italy is varied on account of the many different races that have from time to time invaded it. This is an important point, and renders impossible any general scheme of "family care" which would apply to the whole country.

The Italian Government is much exercised at the increase of lunacy, especially from the financial side, the cost of maintenance reaching

11.65 per cent. of the total budgets of the various departments, many of which will be no longer able to support this expense.

Thanks to the good offices of the Government, we have at last in Italy a "Law for the prevention and treatment of pellagra." The sale of damaged maize is forbidden, and the doctors are obliged to declare any case of pellagra. Every person infected with pellagra will be fed in special sheds (*pellagrosarii*) at the charge of the department and of the communes, the State furnishing every year a subsidy of 200,000 lire. All families in which cases of pellagra may occur will be able to receive the necessary aid. Of course this law will not solve the questions concerning pellagra, but it is without any doubt a great benefit to a large part of our rural population. To correctly estimate this, one has only to remember that, according to the latest statistics, the total number of pellagrous cases was 60,000, and that they are more or less a burden on the national finances.

The Italian psychiatric world has been much stirred this year because of the medico-legal reports which some of our most conspicuous men of science have made on the subject of the last classical brigand of Calabria, Giuseppe Musolino. All experts have admitted that he was an epileptic, but concerning the responsibility of his acts opinions were divided. In fact, the experts called by the defence have denied it; on the other hand, those called by the Tribunal admitted it. One must admit that the Italian Penal Code presents an exceptional place for the mental conditions which delimitate responsibility, and it is because they thought it more just to comply with the Code than with principles of psychiatry that the experts of the prosecution maintained their opinion; at all events, it is perhaps to the great fuss created by this trial that we shall owe the establishing of a special "School for the Medico-legal Experts." The value of the diplomas granted by this school has not yet been determined.

The new regulations for criminal asylums, when they come into force, will prove of great benefit. Up till now these establishments were under prison administration, and the doctor who had charge of the patients played rather a subordinate part. At every Congress of the Society of Alienists this condition of affairs has been deplored, and at last our complaints have been heard, and before long these asylums will become like those for ordinary insane, only they will be surrounded by a wall and be under the special supervision of the Minister of Justice.

We should congratulate ourselves upon another advance, though it does not concern strictly the domains of psychiatry. Following in the footsteps of the "National League for the Protection of Mentally Deficient Children," of which Dr. Ireland has recently written in this JOURNAL, Dr. Pizzoli has established at Crevalcore, near Bologna, a course of lectures approved of by the State, demonstrating the principles of experimental pedagogy to teachers (both sexes) of the primary schools, so as to enable them to recognise the psycho-physiological possibility of the children under their care, and the necessity which may arise for medical or psychiatric assistance.

We cannot describe here the organisation of this institution, which may in the future exercise a great and benevolent influence over the schools. We have been pleased simply to remember the existence of

such an institution and its affinity with our field of studies, and also to prove that in Italy the most generous ideas can be pushed forward and receive a practical sanction.

(1) Simple acute psychoses: states of mania and melancholia, amentia, etc. Chronic primary and secondary psychoses: paranoia and periodical psychoses (hallucinatory psychoses). Senile psychoses: dementia—primary, juvenile, and secondary. Paralytic psychoses: classic paralytic dementia, syphilitic, neurasthenic, choreic, etc. Toxic psychoses: alcohol, morphine, cocaine, etc. Pellagrous psychoses. Infection psychoses: post-influenzal, febrile, syphilitic, etc. Acute delirium.—(2) Sero-therapy in pellagra has been assayed by Drs. Antonini (Voghera) and Mariani (Bergamo), who injected with good results the serum of the blood of cured pellagrous cases into persons affected with this disease. They have published only a brief note on their observations.

RUSSIA.

By Professor P. T. KOVALEVSKY.

The following is a brief notice of the Russian Literature of Nervous and Mental Diseases:

Affections of Bones in Cases of Syringomyelia. By Prof. ANFIMOF, 1902.—The author investigated a case of fracture of the thigh bone in a woman æt. 32, suffering from syringomyelia. There was also fracture of the left radius. Both fractures were spontaneous. The author suggests that the affection is dependent on a "gliotic" disease of the spinal marrow.

Syphilis in the Central Nervous System. By Prof. BECHTEREFF, 1902.—This monograph contains a description of the pathological anatomy of the nervous system in cases of syphilitic disease. The author bases his opinions partly on personal researches and the investigations of his pupils and partly on the literature of the subject.

Acute Hysterical Psychoses. By Dr. MOURATOFF, in the *Messenger of Neurology*, 1902.—The author differentiates real hysterical psychoses from psychical diseases complicated by hysteria. In distinguishing these two groups of psychical conditions one is to be guided by the following clinical phenomena:

1. Immediate dependence of the psychosis on an hysterical attack.
2. The occurrence of hysterical symptoms in the clinical course of the psychosis.
3. When there is no apparent connection between the two groups. Emotional outbursts and maniacal excitement should not be considered as independent forms of psychoses; they form a detail of the picture of the psychical disease, and may enter into the phenomena of hysterical attacks.

Auto-intoxication as a Cause of Mental Disease. Prof. A. POPOFF (*Russian Medical Messenger*, 1902).—This is a very detailed work which advocates that the strongest ætiological factor in psychoses is auto-intoxication. Auto-intoxication is to be divided into—(a) General (organic); (b) Sectional (nervous); and (c) Local. A healthy man can deal effectually with his normal toxins. When from some cause or

other he can no longer do so the organism is poisoned and mental disease is a result.

Effect of Gonorrhœa on the Nervous System. Prof. U. F. FELLENEFF (*Journal of Venereal Skin Diseases*, 1902).—Noting that gonococci are to be found in the central nervous system, the author studies the toxic effects of these germs, which in certain cases produce actual changes in the central and peripheral nervous systems.

The Intra-cranial Circulation in Acute Mechanical Asphyxia. Prof. ORLEANSKY.—The author details his own investigations, and observes that when animals are suffocated by compression of the windpipe the pulse-rate drops, but the amplitude of the pulse-wave increases, probably from stimulation of the centre in the medulla, and there is lowering of the blood-pressure. The intra-cranial pressure rises and the total quantity of blood in the skull cavity increases by the active dilatation of the blood-vessels of the brain.

The Pathology of the Nerve-cells in Cases of Pellagrâ. Dr. KOFOVSKI (*Russian Physician*, 1902).—On examining the brain in those dying from pellagra the author has found that in the protoplasm of the nerve-cells and processes are to be observed fine granular yellow deposits of pigment, which do not stain or enter into combination with reagents. The pigmentation of the processes differs from pathological processes in the other parts of the cell. The pigmentation is different in normal and diseased cells.

Bulbar Paralysis of Vascular Origin. Prof. M. POPOFF (*Neurological Messenger*, 1902).—The author describes a case of bulbar paralysis of vascular origin in a man forty-one years old, who had had syphilis. The illness began suddenly with a fit, and the patient quickly recovered. The author considers the cause of the illness to have been thrombosis of the basilar artery and its branches. He gave a prognosis of probable recurrence and possible death. Two months later the patient came into the Policlinik, where another fit took place and death resulted.

Treatment of Spinal Atrophy. Prof. DARKSHEWITCH (*Russian Physician*, 1902).—The author holds that syphilitic cases are curable in the early stage. In early cases mercurial treatment arrests the progress of the disease, and even causes recovery, but advanced cases are hopeless. One must remember that the symptoms may disappear for a time and afterwards recur.

Obsessions and Fixed Ideas. Drs. GANONCKINE and SOUCHANOFF (*Neurological Journal*, 1902).—They find that obsessions affect men four times as frequently as women. Nearly all the patients had a neurotic heredity and betrayed indecision, suspicions, impressionableness, irritability, argumentativeness, egoism, cruelty, and a dread of mental disease.

Definition of Progressive Paralysis. Prof. CHICH (*Journal of Neurology and Psychiatry*, 1902).—The author gives the following definition:—Progressive paralysis is a parasymphilitic disease of the organism in general which depends on a particular variety of syphilitic poison that pervades the tissues. The pathological and clinical definition of progressive paralysis is the same. It causes proportional and equal destruction of all the tissues, no one organ being attacked by preference

nor one spared; not one function is spared, not one destroyed by preference.

Headaches and their Frequency in Tomsk. Prof. M. POPOFF (*Russian Medical Messenger*, 1902).—The author, after spending several years in Tomsk as Professor of the University, was struck by the prevalence of headaches in Siberia, especially during the winter. The headaches made their appearance with the cold weather and became worse as the severity of the frost increased; they gradually became less frequent and disappeared as the weather grew warmer. He attributes these headaches to anæmia of the brain and altered intra-cranial blood-pressure. The pains were relieved by the constant electrical current; but residence in a warmer climate was the only means of ensuring recovery.

Gout and Neuroses. Prof. P. J. KOVALEVSKY (*Russian Medical Messenger*, 1902).—The author describes four diseases connected with gout: angina pectoris, *Anxietas præcordialis*, epilepsy, and hemicrania. According to his investigations, all these diseases often manifest themselves in gouty subjects; gout, however, must not be looked upon as of ætiological moment in their production, but only as stimulating them to activity. The appearance of such neuroses in gouty affections must be preceded by predisposition, either through morbid inheritance or the habits of the patient. All conditions which favour gout increase the neuroses also; and all measures, therapeutic and hygienic, directed against gout weaken the neuroses. Treatment directed against the neurosis alone will not be effective, it must be directed against the gouty state also.

Digestion in Mental Diseases. By Dr. TOUCHENKO (*Russian Physician*, 1902).—The author records the results of numerous researches on digestion made in twenty-five patients at different hours after meals, and on an empty stomach. His investigations are not limited to abdominal digestion. In one group of cases Dr. Touchenko gives a physiological explanation of clinical facts, based on the latest works of Prof. Pawloff and his pupils on digestion, which proves the existence of two periods in normal digestion, *i. e.* psychical (appetite) and reflex (chemical). He describes two types of derangement, asthenic and torpid. Investigations of the gastric juice in three melancholiacs showed the same derangement of digestion in its first period. No gastric juice or only a small quantity was secreted in the early stage, but later secretion was more profuse, and digestion progressed in a more normal manner.

In an excited maniacal woman a sudden loss of appetite was noted, but in another, on the contrary, an asthenic type of digestion was present. The same thing appears in cases of neurasthenia. In all progressive paralyses at different stages of the disease the digestion had the same type, *viz.* loss of appetite and a quite insignificant derangement of the gastric secretion. In paralytics who chew anything indiscriminately the mastication does not provoke the secretion of gastric juice, but the latter appears as soon as food enters the stomach. In a case of hysterical psychosis the patient did not eat owing to complete absence of appetite. The psychical phase of digestion was thus entirely absent. The same thing was noted in the case of two katatonics during the period of apathy.

On the contrary, during the period of excitement the appetite was healthy and gastric juice was secreted normally. Out of nine paranoiacs five refused food during marked mental excitement; there was no particular deviation in the digestive processes. One patient with perverted feelings satisfied her appetite by preparing food; she refused with disgust to eat it, and had to be forcibly fed with a stomach-tube. The action of the gastric juice was very weak.

In the case of paranoiacs who have for long refused food the following takes place. Gastric juice is secreted in the morning at the time of artificial feeding. The juice, if collected from an empty stomach, often has an acidity 0.4 *per cent.* HCl. Considering the fact that the collected fluid consists of gastric juice mixed with saliva and mucus, Dr. Touchenko concludes that the pure gastric juice of a man contains, not .2 *per cent.* of HCl, but as much as .5 *per cent.*, the same proportion that Prof. Pawloff found in dogs. The researches of Dr. Touchenko are of great value. They show the difference between artificial feeding by means of a stomach-tube and when food is taken normally. They also show the value of milk as being the least excitant of the nervous system; and, finally, they give us rational grounds on which to base the treatment of disturbed digestion in mental diseases.

SPAIN.

By DR. W. CAROLEN.

The State Secretary for the Department of Instruction has to some extent been an agent in the progress of mental science by rendering compulsory for students of forensic medicine a course of lunacy in an asylum extending over two months. By an unfortunate imitation of the Italian system, which in a single chain unites subjects of so diverse a character as toxicology, legal medicine, and mental diseases, the best method of freniatric teaching is not obtained. In Spain, a physician at the end of his career knows nothing at all of mental infirmities and affections. The action of the State Secretary is the more surprising when one remembers his order founding and establishing separate and compulsory chairs, both clinical and theoretical, of dermatology, otology, and ophthalmology. Alienists in Spain are disappointed, and regret that so incomplete a step should have been taken in so important a matter, for physicians at present look either dumb or foolish at court when cases of criminal responsibility, civil incapacity, etc., are being tried.

Psychiatric literature has been scarce, owing to the non-existence of special reviews. All the branches of medical learning are represented journalistically in Spain except mental science. The *Medicine and Surgery Practical Review* in Madrid has published an article of Dr. Otsy Esquerdo relating to "Early Dementia" (7th June), and another by Dr. Bonafonte on "Surgical Interventions in Mental Diseases" (28th July). In the same review of 14th September is to be found "Hysterical Insanity," by Dr. Ots. The latter's pen has

also been responsible for "Convulsive Hysterics," in the *Medical Correspondence* of Madrid (24th February), "Infectious Insanities" (8th May), "Lucid Insanity" (24th October), "Hedonal in certain Forms of Mental Diseases," in *North Medical Gazette* (January), and "Fatal Hemicrania" (May).

New asylums have been constructed at Reus (Catalonia) and Pamplona (Nowarra). In Barcelona the Holy Cross Hospital, the most ancient beneficial institution, founded in the year 1400, has now its lunatic asylum at St. Andrew, one of the suburbs of the great capital. It has been provided with some of the most modern improvements, such as dormitories for the bed treatment of the agitated and maniacal cases, and rooms for the *photo-therapeutic* treatment in certain forms of insanity. Dr. Sivilla, head physician, neglects nothing that can conduce to the well-being and health of his patients. He has advocated with great zeal and strength the open-door system, and is gallantly fighting against an administration which desires no improvement on the old system, which dates from 1850.

The Clinical Hospital of Barcelona, now being completed, will be the seat of a psychiatric clinic. Dr. Giné, of Partagas, a most venerable figure of the speciality and *doyen* of the faculty, is appointed professor. If this proves a success, it will be the first serious attempt to teach psychiatry in Spain.

Epitome of Current Literature.

1. Neurology.

The Plantar Reflexes [*Riflesso plantare: fenomeno di Babinski e riflesso antagonistico di Schaefer*]. (*Ann. di neur., fasc. i, 1902.*) Capriati, V.

IN this paper the author discusses at some length the nature and relationships of the various reflexes which have been described in the foot. There are at present very marked differences of opinion among the various authorities as to the value and pathological significance of these reflexes.

The author considers that the normal plantar reflex can be represented by different movements in different subjects, and that the opinion of those who would limit this reflex to the movement of flexion in the toes is sometimes in contrast with the facts.

The method indicated by Schaefer does not produce anything characteristic; normally it does not give rise to a reflex. In morbid conditions, acting as a painful stimulus, it may sometimes produce Babinski's phenomenon, which is a plantar reflex, and which should not be considered as anything different.

J. R. GILMOUR.

Clinical and Histological Facts in Relation to the Softenings surrounding Cerebral Tumours [*Fatti clinici ed istologici in rapporto ai ram-mollimenti che circondano certi tumori cerebrali*]. (*Riv. di Pat. nerv. e ment.*, January, 1902.) Pellizzi, G. B.

The author describes a case and the pathological appearances found after death, and bases upon it some considerations regarding cerebral tumours. The patient for years had suffered from a monoplegia affecting the one arm, and was also subject to attacks of epilepsy. There was no headache, no vomiting, no disturbance of vision, and no weakening of the intellect. Twenty-five years after the beginning of these symptoms dementia supervened. At the autopsy, a tumour about the size of a small hen's egg was found in the middle of the right Rolandic region in correspondence with the posterior third of the frontal lobe. The tumour was an endothelioma, rich in cells probably of a sarcomatous nature, and without any nervous elements. The author points out the complete absence for twenty-five years of any mental symptoms is in complete accord with the theory of Bianchi, the unilateral nature of the lesion and the extraordinary slowness of its development giving time for compensation. An examination of the contents of the softening showed that the vessels remained normal; the nerve-fibres were very markedly altered, and the nerve-cells were reduced in number. The permanence of any cortical nerve elements was due to the slowly progressive interruption from the gradual compression and to the absence of any inflammatory process. The softening that surrounds tumours has been attributed by some to the compression of the small vessels, or to a superadded obliterative arteritis caused by syphilis or tubercle, the degeneration of the nervous elements following this. The author regards the extension of the softening to have been caused, not by the pressure of the tumour itself, but rather by pressure of fluid surrounding it. This produces in some cases an increase of tension, to which the white matter cannot offer sufficient resistive power, and hence the degeneration.

J. R. GILMOUR.

2. Physiological Psychology.

Theory of Obsession [*Sur la théorie de l'obsession*]. (*Arch. de Neur.*, No. 76, April, 1902.) Arnaud.

In the discussion of obsession the point at issue has been especially the relative importance of the intellectual and the emotional element. Recent experiments apparently establish that organic modifications (muscular or vaso-motor) are anterior to the affective state, and therefore to the idea, and not consecutive.

Arnaud is satisfied with neither the intellectual nor the physiological (peripheral) theory of emotion. It is strongly in favour of the former that an idea becomes obsessive only when there is some mental alteration present; but, on the other hand, there is no fixed relation between the importance of the obsessive idea (as regards possible consequences) and the intensity of the anguish present, and the evolution of the

obsession in crises with intervals of comparative calm is scarcely compatible with the intellectual theory, *i.e.* the hypothesis that the idea plays a preponderating part. The emotional or physiological theory, he considers, proves a useful reaction against the exclusively intellectual doctrine; but when it subordinates everything to neuro-vascular modifications it encounters serious objections. The extreme importance attached to emotional expression and peripheral modifications, as a consequence of this (latter) theory, is not justified by observation; the expression is often, for example, not adequate to the emotion. In the absence of emotion, or with a minimum of such, the most vehement expression may be noticed. On the other hand, in states of very lively emotion the expression may not be perceptible.

The general conclusion of the author, after analysing the various factors brought into play in the evolution of dominant ideas of obsession, is that their cause varies. In some it must be sought in the organic phenomena of emotion, in others in ideas. In either case, however, the emotion or the idea is but the *determining cause* of the obsession. The real deep cause resides in some lesion of the will. Motor disorders (voluntary) are generally present in cases of obsession; hesitation, uncertainty, are strongly evident. In cases of "folie du doute," the type of intellectual obsessions, these motor disorders are especially observed; but they are also present in other obsessions, in the "fear of contact." Abulia is the fundamental condition of obsession, and the emotional and intellectual elements play but a secondary although important part in its pathogeny. H. J. MACEVOY.

Contribution to the Psychology of the Genesis of Psycho-motor Hallucinations [*Contribution à la psychologie de la genèse des hallucinations psycho-motrices*]. (*Arch. de Neur.*, No. 78, June, 1902.) Vaschide and Vurpas.

The object of this paper is to show the important part played by introspection in the mechanism of certain delusions, and especially in the genesis of psycho-motor hallucinations. The complete notes of a case carefully observed in this connection are given—that of a woman aged forty-three years. Tormented by the thought of wrong-doing, by ideas of doubt and fear, the patient was especially anxious to analyse and explain her mental condition. She at first is satisfied that her ideas take birth within her mind, then believes that she is self-hypnotised; a stage further she suspects the domination of some indefinite power which directs her thoughts, experiments upon her, hypnotises her, and speaks within her. If she thinks evil of certain persons she hears them "inside" herself replying, insulting her. At times she moves her lips when speaking her own ideas, and is conscious of a conversation, an asking and a replying, going on in her head. Ideas of guilt are generally associated with these phenomena, and she asks forgiveness for these ideas, which spring up without the intervention of her will. The explanation which satisfies her best is that she is hypnotised and made to think, and the measure of her guilt is the consent which she gives to certain of these ideas—this consent being withheld in the case of others. The thesis which the authors endeavour to

prove is that the interior language is the principal source of a considerable number, if not of most, psycho-motor hallucinations. They urge the importance of a careful study of the mental life of patients, and the fallacy of restricting observations to somatic examination alone.

H. J. MACEVOY.

3. *Ætiology of Insanity.*

Five Observations of Conjugal General Paralysis [Cinq observations de paralysie générale conjugale]. (Arch. de Neur., No. 78, June, 1902.) Kéraval and Raviart.

These five cases are interesting on account of the important question of the ætiology of general paralysis.

(1) Male, æt. 40, with good family history, contracted syphilis while in the army. Married in 1881; no children. He was a good worker up to 1893, when he had dyspeptic troubles which caused him to lose his work and run through his savings. This caused depression. Admitted to Armentières Asylum, September, 1896, with physical and mental symptoms of general paralysis; the disease rapidly proved fatal.

His wife, æt. 40, of good family history, presented signs of tabes and depression. After the death of her husband her melancholia became aggravated, and she was admitted to the asylum with ideas of grandeur and lightning pains. She became demented, developed tremors, etc., and died in December, 1899, of paralytic cachexia.

(2) Male, æt. 50, with a good family history. No alcoholism nor syphilis. Married in 1878; he had two healthy children. Nineteen months before the present illness suffered from gastric symptoms; giddiness. Now exhibits typical signs of general paralysis, attributed to worry through his wife leaving him in 1886 to lead a life of debauch.

Wife, æt. 40, returned in ill-health to her husband a few months ago after fifteen years' absence spent in debauch and prostitution. Now suffering from advanced general paralysis. No clear history obtained of syphilis. Alcoholic and venereal excess for fifteen years.

(3) Male, æt. 48, employed in a brewery. Had one uncle a general paralytic. Married and had four healthy children. Drank to excess at times. On admission in August, 1895, was suffering from melancholia, delusion of persecution. In January, 1896, mental confusion, weak-minded, physical signs of general paralysis. Died in March, 1897. His wife, æt. 49 years (good family history, a drinker), a year after the admission of her husband develops progressive mental weakness. In December, 1896, she develops physical signs of general paralysis, and dies in May, 1897.

(4) Male, æt. 38 years, blacksmith. No syphilis, no alcoholism. Family history good. Married in 1877; one daughter. In March, 1889, was wounded in the head while at his work, and shortly after developed hallucinations of vision. Later he developed typical general paralysis (loss of memory, affection of speech, epileptiform attacks, etc.). He died in March, 1897.

His wife, æt. 33 years (good family history, no alcoholism), after her

husband's illness was left poor. In 1894, without any other reason apparently than grief and poverty, developed mental symptoms—ideas of grandeur, incoherence, etc. She became more and more demented, showed physical signs of general paralysis, and died of the usual marasmus in November, 1898.

(5) Male, æt. 45 years. One twin brother died of general paralysis at the age of thirty-nine. Married twenty years, has had five children. No history of alcoholism or syphilis. Five months before admission developed "cerebral congestion;" then became melancholic, with delusions of negation. Physical signs of general paralysis appeared later; he became demented, and died two and a half years after admission into the asylum.

His wife, æt. 40 years, without any apparent cause but grief, became demented two years after her husband's illness. She presented the mental and physical signs of general paralysis, and died of marasmus six months later.

In spite of the difficulty of obtaining full data in the history of such patients, the observation of these cases does not favour the view that syphilis is the one constant factor in the ætiology of general paralysis, or that there is any one constant factor. In the first case, syphilis was almost undoubtedly the cause, in the second, probably; but in the third, the only factor seems to have been alcoholism. In the fourth, traumatism in the husband and grief in the wife; and in the fifth heredity in the husband and grief in the wife are the only apparent causes. In none of these observations does the occurrence of general paralysis in a married couple appear to have been a mere coincidence.

H. J. MACEVOY.

On the Investigation of Heredity and the Degeneration of the Spanish Hapsburgs [Ueber die Untersuchung von Vererbungsfragen und die Degeneration der spanischen Habsburger]. (*Arch. f. Psychiat., Band xxxv, Heft 3.*) Von Stradonitz.

Dr. Stradonitz, in a long paper, recommends historical research in connection with hereditary disease, and prescribes some methods of inquiry which are sufficiently obvious. Every one has two parents and four grandparents, and in this ratio his ancestors might go on doubling at each generation, till three hundred years back the ascendant roll might have 1024 persons. Actually this never takes place through the marriage of cousins in the first, second, and farther degrees.

The author is a doctor of law and philosophy, not of medicine, which may explain some of his oversights. Dr. Stradonitz passes over the fact that the first application of history to illustrate the laws of hereditary insanity was made by me twenty-two years ago in the paper "On the Hereditary Neuroses of the Royal Family of Spain," published in the *Journal of Mental Science*, and reprinted in "The Blot upon the Brain." He cites the genealogical table of the Spanish royal family framed by Déjérine in his "L'hérédité dans les maladies du système nerveux" (Paris, 1886), which was compiled from my paper, as the French professor, of course, acknowledged. Dr. Stradonitz makes no reference to historians using the English language like Robertson,

Prescott, Stirling, and Bergeroth, who have added so much to the history of the Spanish kings. He adopts the ingenious ("geistreich") hypothesis of Lorenz that the origin of the neurosis of the Spanish dynasty came from John of Gaunt through his daughters, the half-sisters Philippa and Catherine, who, he says, were drunkards. This is perplexing, for neither John of Gaunt nor his father, Edward III, was insane. John took for his second wife Constance, the daughter of Pedro the Cruel, of Castile, through whom the neurosis may probably be traced back to Pedro II, of Portugal (1357—1367). Catherine, the daughter of Constance, was married to the Prince of the Asturias, afterwards Henry III, king of Castile. John of Gaunt was thrice married, yet none of his descendants by his English wives seem to have been insane, though Henry IV, his eldest son, became epileptic towards the end of his life. The derangement of Henry VI of England was probably derived from his French mother.

Dr. Stradonitz gives us some additional information concerning the mental weakness of the Spanish kings Philip III and Philip IV, and their brothers and sisters. He neglects to take into consideration their illegitimate descendants, of which kings generally have plenty. These, not being the offspring of consanguine unions, are more healthy than the legitimate children, and often escape the ancestral taint. There is a strain of insanity and nervous disease in every royal family in Europe, and the only way to regenerate them is to prohibit close marriages, and to make the members marry into healthy stocks.

WILLIAM W. IRELAND.

4. Clinical Neurology and Psychiatry.

Potential Criminality and Homicidal Obsessions [*La criminalità potenziale e le ossessioni omicide*]. (*Arch. di Psichiat.*, vol. xxiii, fasc. 4, 5, 1902.) *Mariani*.

This is the report of a case of homicidal obsession developing as a result of nervous exhaustion in an individual of the so-called criminal type.

The patient, an unmarried woman æt. 27, with slight hereditary nervous taint, after a series of emotional shocks and a prolonged attack of uterine hæmorrhage became subject to intense homicidal obsessions with præcordial anxiety. She suffered also from periodical migraine, from occasional attacks of vertigo, and from recurrent fits of depression. Under tonic treatment with hypnotism the obsessions were removed.

The anthropometric examination of the patient showed the existence of a considerable number of the characters assigned by the Italian school to the homicidal type—relative over-development of the arms, prominent supra-ciliary ridges, large orbital fossæ, square voluminous maxilla, virile physiognomy, sensory and motor sinistral predominance, etc.

In the author's opinion, the development of homicidal rather than of suicidal obsession under the influence of nervous exhaustion is to be

attributed to the latent criminal disposition of the patient, this disposition being shown by the somatic and functional stigmata, and by the existence of symptoms of probably epileptoid character.

W. C. SULLIVAN.

On the So-called Polyneuritic Psychosis [Sulla cosiddetta psichosi polineuritica]. (Il Manicomio, anno xviii, No. 2, 1902.) Esposito.

In this paper, the author reports two personal observations which presented a combination of mental disturbance with symptoms of peripheral paralysis, and in connection therewith enters at some length into a critical examination of Korsakow's disease.

In the first case, the patient was a man 41 years of age. The mental symptoms consisted in a short prodromal phase of insomnia and malaise, followed by vague, unstable illusions and hallucinations with profound disorder of attention and memory, the memory defect taking the form of immediate amnesia for recent events with good recollection of past events. On recovery, the amnesia for the period of the attack persisted. The accompanying somatic phenomena included a moderate degree of paresis and anaesthesia in the lower limbs, more marked distally, with some exaltation of the patellar reflexes. No electrical examination was made. These symptoms, in the author's view, justify a diagnosis of multiple neuritis. The only ætiological factor was alcoholism.

In the second case the patient, æt. 35, presented somewhat similar symptoms of confusional insanity—mobile hallucinations with vague delirium of persecution and motor agitation—ending in recovery within two months. The memory defect consisted in very rapid amnesia for recent impressions with less marked loss of recollection for past events. On recovery the salient incidents in the period of the attack could be evoked. The chief somatic symptom was a paralysis of the right internal rectus, apparently from a nuclear lesion. The onset of the attack was marked by vertigo and titubation. In addition to alcoholism, syphilis and malaria were noted in the patient's history.

Discussing the recent literature of the polyneuritic psychosis the author notes a tendency to apply the term indiscriminately to all cases where confusional insanity is associated with any sort of peripheral paralytic symptoms. He would maintain, on the contrary, that to justify the retention of Korsakow's disease as a nosological entity it should be shown that the two orders of symptoms are in some essential connection, and that the mental condition has in it something distinctive. He holds that neither of these propositions is true: multiple neuritis frequently occurs without mental symptoms; the mental symptoms described by Korsakow are often seen without any evidence of neuritis; and the special disorder of memory, which has sometimes been regarded as pathognomonic, is met with not uncommonly in all toxic-infectious psychoses, and may be absent in cases of insanity with multiple neuritis.

The author publishes his cases as examples of the fortuitous co-existence of the mental and somatic phenomena.

W. C. SULLIVAN.

The Nature and Pathology of Myoclonus Epilepsy. (Amer. Journ. of Insanity, vol. lix, No. 2, 1902.) Pierce-Clark, L., and Prout, T. P.

After an introduction and historical sketch of this rare and interesting disease, the authors give a detailed analysis of the recorded fifty-seven cases as to ætiology, symptomatology, prognosis, diagnosis, and treatment. The ætiology rests largely upon a family predisposition of degeneration, *plus* a transient and slight excitant of the character of a toxic or autotoxic agent. In the development of the disease epilepsy appears first a few weeks to several years in one half the cases; in rare cases the epilepsy ceases in later life. The epileptic attacks are usually *grand mal* in character, preceded by myoclonic spasms. For a greater or longer period of time after the fits the patient is free from his myoclonus. The myoclonus is often atypical in degree and character. There is usually much mental impairment attending the development and end of the disease. The prognosis is poor, yet life is often prolonged for years, the patient dying finally of inanition, pulmonary congestion, and premature senility. The children begotten of myoclonic epileptics usually die early of an intercurrent affection, yet they in turn may live to develop the disease. The disease has been found in many cases indirectly as well as directly transmissible. The disease is largely one of the family type of neurosis. The authors place emphasis upon the fact that faulty diagnosis is the result of laying too much stress on single symptoms of the disease. The treatment, while largely palliative, must be undertaken with great care in the proper use of large doses of sedatives. Bromides rank in first place. The hypochlorisation adjuvant principle is highly recommended. Cases not benefited by bromides are decidedly in the minority. Chloral in connection with bromides is recommended in stubborn cases. Care of the diet, general hygiene, and a non-stimulative country existence are found to give best results. The authors present three new cases, which, in addition to one previously reported by Clark, constitute the only cases of the association disease at present in the English language. A study of the cortex in one case under ideal conditions of methods was made, and lesions found were in the second and third layer of cells, those of sensory and motor type. The changes in the second or sensory type are those which the authors have previously urged as the characteristic lesion of epilepsy, while those in the third or large pyramid cell are charged to the myoclonus. The lesions as demonstrated by *camera lucida* drawings were a destruction of the intra-nuclear network and its replacement by a granular substance. As a consequence of this change in the cell, body abstraction of the nucleolus occurred easily and frequently in making the sections. The exhaustive lesion of chromatolysis was shown over the entire cortex. The pathogenesis of the association disease appears to be an intoxication or auto-intoxication of motor and sensory cortical cells, probably brought about by a faulty chemotaxis of such because of their inherent cellular anomaly.

Imbecility and Asexualism [Imbecillità ed asessualismo]. (Il Manicomio, Anno xviii, No. 2, 1902.) Angiolella.

This is a report with full anthropometric details, and illustrated by two photographs, of a somewhat uncommon case of sexual abnormality with arrest of mental development.

The patient, a youth 18 years of age, presents the general physical characters of infantilism; no trace of the testes can be made out; the scrotum is represented by a slight cutaneous prominence with a median raphe, above which is a rudimentary penis—an appendage 1 cm. long and about $\frac{1}{2}$ cm. in diameter, traversed by the urethra, but showing no differentiation of a glans and no trace of a corpus cavernosum. There is slight gynæcomastia, and general absence of secondary sexual differences. Mentally, the patient's level is that of a rather dull child. There is a total absence of sexual feelings and instincts, whether in normal or abnormal directions. The patient's parents are both weak-minded, and there is an indefinite history of some operative interference on the occasion of patient's birth.

In a lengthy and acute discussion of the case the author argues that the psychic neutrality of the patient justifies an inference that the condition is one of total absence or most rudimentary development of the testes, and not of cryptorchidism; and the psychic state, he holds, is to be regarded as the result and expression of the physical anomaly. Moreover the non-development of the related areas of the nervous system reacts on that system as a whole, and is the cause of the arrest of mental growth. The case may accordingly be described as one of asexual imbecility, and classed as a special variety of cerebroplegic (Freud-König-Tanzi) or cerebropathic (de Sanctis) idiocy. Its mechanism may be supposed to be in part through the absence of the internal secretion of the sexual glands, in part through the anatomical and physiological effects of the non-development of considerable nerve tracts, and in part also through the lack of the instincts and feelings which are at the root of the social personality. W. C. SULLIVAN.

Suicidal Tendency and Suicide in the Insane [La tendenza al suicidio ed i suicidii negli alienati]. (Il Manicomio, Anno xviii, No. 2, 1902.) Gucci.

The aim of this paper is to investigate the frequency of suicidal tendency in the insane, and the forms of mental disease in which such tendency is more common, and further to determine how often and under what conditions asylum patients find means to commit suicide.

The author takes his evidence on these points from his experience in the Florence asylum. In the section for men in that institution, there were, on the day selected for inquiry, 405 patients, of whom 124 were noted as suicidal before reception, and 8 others were subsequently found to be so. Of these 132 (32.59 per cent. of the total number of inmates) the suicidal tendency had persisted in 87 (21.48 per cent.), and was regarded as particularly dangerous in 14 (3.4 per cent.).

The forms of insanity with most suicidal proclivity were found to be dementia præcox, melancholia, and epilepsy. In the asylum, the suicidal

tendency usually persists, though the attempts gradually become less frequent. The usual method is strangulation.

In the Florence asylum, the number of actual suicides from 1844 to 1901 was 22, being 0.91 per thousand admissions. Relative to the numbers of the inmates, the frequency of suicide has been very much less in the latter years of the period.

The author illustrates his remarks by numerous detailed clinical notes. W. C. SULLIVAN.

Traumatic Astasia-abasia in an Epileptic Child [Astasia-abasia traumatica in bambina epilettica]. (Riv. di pat. nerv. e ment., February, 1902.) Gabbi, V.

The patient was a child of 7 years, of good family history, both direct and collateral. No other members of the family suffered from epilepsy, and there was no evidence of syphilis. Somewhat slow in development, she began to walk and speak in her fourth year. About this time she would fall down with loss of consciousness lasting from five to six minutes. Bromide diminished these attacks, but afterwards marked convulsions developed, without aura or cry, with frothing at the mouth, incontinence of urine, marked prostration, and headache. Further symptoms supervened. On examination the patient was found to be well developed and nourished. Each three or four months she suffers from the convulsive attacks previously described. Percussion of the head causes the following phenomena:—A light blow on the scalp or face without warning to the child causes either an immediate fall or sudden and very marked trembling, and movements in the upper limbs are noticed. These bear no relation to the strength of the blow, and any hurt to the body produces no effect. Methodical percussion over the motor areas does not produce any isolated contraction. There is no difference on the two sides of the cranium. Excitement increases the effects. Anæsthesia of a skin area by chloride of ethyl produces no alteration. Electrical stimulation does not influence the condition. After the fall the child arose crying and agitated, the walk was uncertain and hesitating, the arms being used to balance, and she walked zigzag, as if the power of directing herself were lost—almost like a cerebellar gait.

The author discusses at some length the condition. Astasia, which is in this case the principal symptom, has been variously described and classified, and has been generally held to be of an hysterical nature. Charcot considers that for the execution of the movements in the erect posture and walking we have two centres, the one cortical and the other spinal; and that in astasia-abasia this mechanism is faulty—a form of spinal amnesia. Friedländer considers the centres affected probably cortical. Ballet considers that the symptoms may be produced not by amnesia, but by a fixed idea from subconscious fear of want of power to remain erect.

The child being epileptic, the motor areas are probably a *locus minoris resistentia*, and so may be centres for the provocation of morbid phenomena. As the manifestations of epilepsy are spontaneous astasia and convulsive seizures, so hysteria may reproduce an astasia, a rudimentary

form of convulsive attack, the reproduction though incomplete being true. The case is of interest in being traumatic. J. R. GILMOUR.

The Light Reflex studied in the same Patients during the Three Stages of General Paralysis [Du réflexe lumineux étudié chez les mêmes malades aux trois périodes de la paralysie générale]. (Gaz. des Hôp., No. 30, March 13th, 1902.) Marandon de Montyel.

The author observed 104 general paralytics, but only 30 of these passed through the three stages, the others dying either in the first or second stage; 750 successful observations were made altogether, from which the following important conclusions among others are made by the author. The light reflex is more often abnormal than normal, and the alteration is almost invariably in the sense of diminution. Diminution and abolition were about equally frequent, and mostly the same in the two eyes. Abnormality was found in about one fourth of the admissions. Certain differences in the frequency of abnormalities were found according to the form of general paralysis, and according to the apparent ætiology. In the first two stages of the disease the light reflex was more altered in cases exhibiting motor affection. No clear relation seems to have been observed between alterations of the light reflex and sensory affections, except that diminution of tactile sensation was associated generally with some abnormality of the light reflex or its abolition. While examination of the light reflex, by revealing frequent and early alterations, is useful in the diagnosis of doubtful cases of general paralysis, it is of no assistance in prognosis. H. J. MACROVOY.

The Accommodation Reflex (Pupillary) studied in the same Patients during the Three Stages of General Paralysis [Le réflexe accommodateur étudié chez les mêmes malades aux trois périodes de la paralysie générale]. (Rev. de Psychiat., No. 6, Juin, 1902.) Marandon de Montyel.

Dr. de Montyel gives the results of his investigations on the sixth of the reflexes which he undertook to study in general paralysis. The discrepancies noticed in the conclusions of many other observers are attributed to their studying patients in various stages; in all researches of this nature it is indispensable to follow the only method susceptible of furnishing data which may be compared with one another,—that is, following up and examining the same patients from the onset to the termination of the disease. Out of 104 cases of general paralysis this method was satisfactorily carried out in the case of thirty only, the others having succumbed either in the first or second stage; 680 satisfactory observations were made, and the results of these are carefully tabulated. The following are some of the author's general conclusions:—Accommodation is more often abnormal than normal in general paralysis; exaggeration of the reflex is rare; diminution is twenty-four times more frequent—abolition being slightly more common than simple diminution. The reaction is nearly always equal on the two sides; in a few rare cases one finds normal accommodation on one side and abolition on the other. In the early stage only does one find

normal accommodation more frequent than abnormal ; but in the second, and more so in the third stage, abnormality is the rule. Abolition is commoner in the late stage. In more than a third of the remissions there was abnormality. Certain differences in the accommodation reflex are found in the various forms of the disease ; it is more often and more profoundly altered with conditions of excitement. As regards the ætiology the reflex was always found abnormal in traumatic general paralysis ; next in frequency (*i. e.* after abnormality of reflex) comes the alcoholic form. Alteration of the reflex is common with cases at the extreme ages of incidence of the disease (after fifty and below thirty). Accommodation was more often and more profoundly affected in the first two stages of general paralysis in proportion to the impairment of motor power. The investigation of the accommodation reflex on account of its frequent and early alterations may be helpful in the diagnosis of doubtful cases, but it affords no indication as to the slow or rapid evolution of the disease.

H. J. MACEVOY.

Observations on General Paralysis at the Clinique of the University of Moscow [La paralysie générale d'après les données de la clinique psychiatrique de l'Université de Moscou]. (Arch. de Neurol., No. 81, Sept., 1902.) Soukhanoff and Gannouchkine.

Out of a total of 3916 cases of insanity (2493 male and 1423 female) observed at the Moscow Clinique for Mental Diseases between November, 1887, and January, 1901, there were 682 of general paralysis—590 men and 92 women ; so that nearly 25 *per cent.* of the male and 6.57 *per cent.* of the female cases were general paralytics. The proportion is larger in recent years than in the earlier years of the foundation of the clinique. The greater number of cases in men were between thirty-six and forty years of age ; in the case of women the commonest age is thirty-one to thirty-five years. The authors give notes of three cases of juvenile general paralysis. Various tables of classification dealing with occupation, nervous heredity, alcoholic inheritance, presence of syphilis, etc., are given, and the following are some of the authors' general conclusions :—General paralysis is uncommon or even rare in the case of farm labourers. The importance of heredity is great in the case of general paralysis, as in other psychoses or mental diseases. Syphilis was present in more than 75 *per cent.* of the cases, and in 90 *per cent.* of these there was an interval of from six to twenty years between the date of infection and the appearance of morbid symptoms. Alcoholism is of importance in the ætiology of general paralysis in men ; in over 60 *per cent.* there is a marked history of abuse. The demented form of general paralysis was observed in half the male cases, the maniacal form being next in frequency. In women two thirds of the cases were of the demented type, and a quarter of the maniacal. The demented type was decidedly commoner in recent years. Concerning certain symptoms especially noted in general paralysis, the authors found that among men exaggeration of the knee-jerks was present in about half the cases, absence in one fifth ; among women exaggeration was found in about 60 *per cent.*, and absence in 15 *per cent.*

As regards the state of the pupils, about one third of the total number of general paralytics presented equality of the pupils, and two thirds inequality; but in nearly four fifths the pupils were either inactive or presented a feeble reaction to light. Apoplectiform attacks were common, and epileptiform attacks rare.

H. J. MACEVOY.

Biography of a Fixed Idea [Biographie d'une idée fixe]. Observation of Casper. (Arch. de Neurol., No. 76, April, 1902.) Casper.

This is the interesting account of a case, mostly the autobiography of the patient, relating the development of an idea of morbid blushing in a boy, which persisted for years, and finally apparently led to suicide, after the victim had at one time seriously contemplated blinding himself on account of his ereuthophobia.

H. J. MACEVOY.

Notes of a Case of Hystero-Epilepsy with Distinct Crises, Spontaneous Ecchymoses, and Attacks of Hysterical Fever [Note sur un Cas d'Hystéro-Epilepsie à Crises distinctes avec Ecchymoses spontanées et Accès de Fièvre hystérique]. (Arch. de Neurol., No. 77, May, 1902.) Mullevert.

The case is that of a girl æt. 18 years, who was admitted into the Mulhouse Hospital on January 11th, 1899. She was illegitimate, and her family history was unknown. From the age of eight she had frequent convulsive attacks, occasionally preceded by an aura (visual), during which there was loss of consciousness, frequent biting of the tongue and lips, and injury to the head, and occasional involuntary micturition (no doubt *epileptic*). At the onset of menstruation she had some nervous disturbance. After admission two small bluish spots were noticed on the right knee; similar ones had apparently been present before, and others were observed on several occasions during her stay in hospital. They were painless, and usually disappeared in a few days. During her stay in the hospital she had several apparently typical epileptic attacks. She was treated with bromide of potassium.

On December 23rd, 1900, she was admitted for the second time. While out of hospital, with the exception of an interval of six months' freedom from fits, she had been about the same. On January 5th and the 13th she, however, developed two attacks, differing from the others in the character of the convulsive movements, and in the second she did not lose consciousness; it was followed by a febrile attack without apparent cause. On the 23rd a second attack of fever. During the next fortnight small, almost painless nodules, with redness of the skin over them, appeared on the arm, on the thigh, and on the calf (left side). On February 8th she had another typical epileptic attack, and three weeks later, after other hysterical symptoms, she had an hysterical fit with convulsions.

The interest of the case is especially in the association of true epilepsy with hysterical attacks—hystero-epileptic attacks appearing in

a girl the subject of epilepsy since infancy. The occurrence of the spontaneous ecchymoses and attacks of fever (the latter observed five times during her stay in hospital) without any obvious cause, and not apparently immediately related to the convulsive attacks, leaves no room for doubt that they were in reality hysterical manifestations.

H. J. MACEVOY.

General Paralysis in Twins [Observation de paralysie générale gémellaire homomorphe ; délire des négations]. (Arch. de Neurol., No. 77, May, 1902.) Keraval and Raviart.

A. D. Q— was admitted into Armentières Asylum, September 14th, 1888, at the age of 39. His early symptoms began apparently after the death of his wife about four months before; he was depressed, said he couldn't eat, that he was dead, left off working, and stayed in bed. On admission he presented all the signs of general paralysis of the melancholic type, with delusions of negation. The disease progressed rapidly, and he died in January, 1889.

J. V. Q—, his twin brother, was admitted on November 3rd, 1896, at the age of 47. Five months before he had "cerebral congestion," and became queer in his head; six weeks before admission he presented very definite symptoms of insanity; refused food, thought he was dead, and kept to his bed. On admission he was depressed, scarcely answered questions, often cried, and had marked delusions of negation ("all is lost," "it is no use eating," "he is dead," "has no legs," etc.). The physical signs of general paralysis soon appeared; he became more and more demented, and died in a condition of paralytic marasmus in May, 1899. (His wife died of general paralysis in January of the same year.) The most interesting part of this observation is the appearance of the same type of general paralysis in twins, without any definite cause, such as nervous heredity, alcoholism, syphilis. It was not folie à deux; the two brothers were married, and lived apart from each other, and the affection appeared in one eight years after the other. Of course, one must not lose sight of the fact that J. V. Q—'s wife died of the same disease, so that, perhaps, syphilis could not be excluded for certain.

H. J. MACEVOY.

On Agrammatism following Inflammation of the Brain [Ueber Agrammatismus als Folge von Herderkrankung]. (Zeits. f. Heilkunde, Heft 2, 1902.) Pick.

In a reprint from this journal Professor Pick describes the case of a woman æt. 41 years, who after confinement showed symptoms of mental derangement. She was much excited and tore her clothes; speech was much disordered. When admitted to the clinique at Prague she was found to speak indistinctly, slurring over some consonants. The same deficiency was found in her writing, which scarcely recalled the words she was supposed to signify. She could understand reading, and what was said to her, though her intelligence was notably impaired. After a

short stay in the hospital she was discharged, but was brought back eight months after in a much worse condition. In her writing, both to dictation and spontaneously, she only reproduced a few letters, though she copied correctly. There was paresis of the right side. The mental power went on diminishing, and the speech getting more unintelligible, till she died of pneumonia ten months after admission.

On examination, there was found a distinct diminution in the lower portion of the second and third frontal gyri. This extended to the top of the left temporal lobe. There was also atrophy of the same parts on the right side, but less marked. The left hemisphere weighed 408, the right 430 grammes.

Microscopic examination showed degeneration of Broca's convolution and the whole temporal lobe on the left side. This was thought to be the sequel of acute encephalitis.

Dr. Pick observes that one cannot say whether the morbid process, which in the end involved the whole speech zone, affected the whole tract at once, or began with the temporal lobe, thence spreading to the frontal gyri. In the first case the paraphasia might be regarded as the first stage of the complete aphasia; in the second case it would be consonant with the view previously illustrated by Dr. Pick that agrammatism is the result of lesion of the temporal lobe. Déjérine and his school hold that agrammatism may be simply a stage in a degenerative affection of Broca's convolution. This view has been recently supported by Bernheim in his treatise *De l'Aphasie motrice* 1901. On the other hand, Pick assures us that he has studied the whole literature on the subject, and has constantly found that this affection of speech is associated with lesions of the temporal lobe. This holds good even with the cases cited by Bernheim. In no clinical cases is the possibility of the implication of the temporal lobe excluded, and in all the cases which came to examination after death the temporal lobe was found to be involved. Pick remarks that the independence of thought from words is now admitted even by some philologists, and he quotes the recent treatise on *The Psychology of Thinking*, by Benno Erdmann, that the real conception which is intertwined with words in formulated thought is not produced, but only indicated through speech.

WILLIAM W. IRELAND.

5. Pathology of Insanity.

The Pathology and Pathogenesis of the Acute Confusional Psychoses [Studi sull' Anatomia Patologica e la Patogenesi delle Psicosi Acute Confusional]. (Riv. di Pat. Nerv. e Ment., July, 1902.) Camia, M.

This number is wholly occupied by a paper on this condition. The author has already in previous numbers described seven cases, and he now records fourteen others, in addition to which he has collected from various sources over fifty cases.

Dr. Camia tabulates the various alterations in the nerve-cells in the nerve-fibres both in the brain and cord, and also the chief alterations noted in the organs throughout the body. Certain of the cases without complications presented a picture with slight alterations of the chromatic

substance of the cells in the various parts of the nervous system ; slight fatty degeneration of the epithelial cells in the liver and kidney, and with a certain amount of increase in the nuclei of the vessel walls. These changes may be taken as the basis of the condition, being common to all. In cases of delirium tremens these do not differ in any marked characteristic from cases with the common symptoms of marked mental confusion. From the anatomical point of view there is a difference in certain cases with motor signs or with hallucinations of sight, of alterations in the cells of origin of the pyramidal tract from "reaction at a distance."

As regards the origin of the toxic substances, pathological anatomy is not yet sufficiently advanced. There must be a lessening of resistance of the nervous system of those affected, probably of a hereditary character. In alcoholics, for example, some such difference may determine whether their symptoms shall consist of delirium tremens, or one of the psychoses, or some other disease. Similar considerations probably act in all cases of chronic intoxication. Even in the cases developing in convalescence from acute infective conditions, altered processes of "assimilation" may be advanced.

A third group consists of true febrile delirium, either manifested during the course of a septicæmia or the so-called cases of absorption in which the septicæmia had passed off.

In the last group of cases, no evident etiological factor is present. Bianchi and Peccenino have stated the existence of a specific bacillus. Philipppers considers cases of shock as cases of intoxication, caused by alterations in the metabolism produced by the influence of the nervous action. In some of these forms of psychosis a similar origin may exist ; it may be by a psychic or nervous injury causing sudden alterations in the metabolism. We are able to draw the conclusion that pathological anatomy does not clear up the pathogenesis of many cases ; the acute confusional psychoses have a common symptomatology and anatomical lesions, probably all caused by chemical alterations which may depend upon very varied causes.

J. R. GILMOUR.

On the State of the Cerebro-spinal Fluids in General Paralysis [Ueber das Verhalten der Cerebro-spinal Flüssigkeit bei Dementia Paralytica, etc.]. (Allgem. Zeits. für Psychiat., Bd. lxx, H. 1.)

The author recalls that since Quinke, in 1891, directed the attention of the Wiesbaden Congress to the use of lumbar puncture, numerous publications have appeared on the subject. He observes that the high expectations of the therapeutic value of this operation have not been realised, any improvement following being seldom lasting. It has been used with most effect in acute, serous, and sero-purulent meningitis, and less so in simple hydrocephalus, brain tumour, and tubercular meningitis. Lumbar puncture has, however, been an important addition to our means of diagnosis. Through it we are able to ascertain whether there is abnormal increase in the spinal fluid. This gives an important indication in cases of brain tumours and of serous meningitis with obscure symptoms. In doubtful cases of tubercular meningitis the

detection of tubercle bacilli in the spinal fluid determines the diagnosis of the disease.

Quinke gives the pressure of the spinal fluid taken lying on the side as 40—70 mm. ; Riecken, 40—60 mm. ; Bergmann, 40—130 mm. ; Gumprecht, 40—100 mm. The height notably increased on sitting up. Any pressure above 150 may be put down as pathological. In acute serous meningitis and in tumours of the brain a pressure up to 700 has been noted. With due aseptic precautions the operation of puncture is quite safe.

Dr. Schaefer made fifty-three punctures in twenty-five cases of general paralysis, and found an average pressure of 182 mm. ; in two thirds of the cases the pressure was between 250 and 280. In the fourteen general paralytics in which spinal puncture was practised by Turner, the pressure lay between 70 and 320 mm., while in fourteen cases of paralytic women in the supine posture the mean pressure was found by Nawratski and Arndt to be 113 mm.

Dr. Schaefer considers that the increased amount of fluid in the brain and spinal cord of general paralytics is owing both to the wasting of the nervous tissues and to the fluid exuded from the inflamed membranes. Dr. Schaefer found the rate of pressure to remain high after repeated punctures. He never allowed fluid to pass to reduce the height below 40 mm. The pressure in *tabes dorsalis* was as high as in general paralysis.

Dr. Schaefer had a bad case of chronic epilepsy. There was stupor with clonic spasms in some muscles. Assuming that there was pressure of fluid in the occipital region of the cranium, he tried to relieve it by a puncture in the spinal region, when the clonic spasms promptly ceased and the stupor diminished. He found that the pressure in epileptic dementia was about 180 mm. This was higher than what was observed by Nawratski and Arndt, who give their mean as between 100 and 150 mm. Schaefer observes that his were cases of long-standing dementia, in which there was atrophy of the brain and hydrocephalus *ex vacuo* ; he found that the pressure of the spinal fluid was much increased by impeded or suppressed respiration. He found that in fifteen idiots the fluid pressure varied from 130 to 500 mm. The mean was 220 mm. In twenty imbeciles the pressure ranged from 65 to 290, the mean being 170 mm. This he considers to be owing to the transudation of fluid in place of defective development of the brain, or sometimes owing to the deposit of meningitis. The quantity of albumen in the spinal fluid of healthy persons is very small.

Nawratski found that in general paralysis the albumen in the spinal fluid was always increased, the quantity ranging from 0.468 in the thousand to 1.696, the mean being 0.891 per mille.

Schaefer himself found an increase of albumen in all the cases of general paralysis ranging between 0.75 and 3.5 per thousand, the mean being 1.23.

He gives the amount of albumen in the spinal fluid in patients suffering from various affections, as ascertained by Riecken, to be in—

Meningitis serosa chron. and hydrocephalus .	0.95	per mil.
Meningitis serosa acuta	1.84	„
Meningitis tuberculosa	200.0	„
Tumor cerebri	2.17	„

Schaefer himself found that the mean amount of albumen in the spinal fluid was—

1. In dementia after apoplexy . . . 0.25—0.3 per mil.
2. In secondary dementia . . . 0.3 —0.5 „
3. In congenital weak-mindedness . . . 0.33—0.5 „
4. In epileptic dementia . . . 0.3 —0.5 „

In four cases of this form it was 0.75—1.5 per mil.

Dr. Schaefer gives as the general result of his researches that in general paralysis the pressure of the cerebro-spinal fluid is notably increased, as also the proportion of albumen, and that in the other forms of mental impairment the pressure of this fluid is almost always higher than in the normal condition.

WILLIAM W. IRELAND.

6. Treatment of Insanity.

The Serum Therapeutics of Epilepsy [*La sieroterapia dell' epilessia*]. (Arch. di Psichiat., vol. xxiii, fasc. 4, 5, 1902.) Roncoroni.

The author criticises adversely the experiments and theories of Dr. Ceni published in a paper analysed by Dr. Sainsbury in this JOURNAL (*vide* page 782), and records a series of observations which he has made with a view to testing Ceni's results.

In Ceni's cases any favourable effects of the serum injections were evident within the first fortnight of treatment. Roncoroni has therefore assumed that a relatively short period of experiment is sufficient for decision, and his observations have accordingly been made within a period of three months.

Serum from one female and five male epileptics was injected at regular intervals and in increasing doses into eight other patients—six epileptics, one dement, and one imbecile. No effect whatever was produced either on the body-weight or on the frequency of the fits. In further experiments serum from two of the epileptics and from the two non-epileptics in the above series, taken at the beginning of the second month of treatment, was similarly injected in progressively increasing doses into four other epileptics. Here also the results were entirely negative. In none of the experiments were any toxic effects noted.

These observations accordingly are in contradiction with Ceni's theory of a "specific stimulating substance" in the blood-serum in epilepsy, and also with the hypothesis that the serum in epileptics contains any substance capable of determining the formation of epileptic antitoxins.

W. C. SULLIVAN.

Clinical Treatment of Inebriety. (*Quarterly Journ. of Inebriety*, vol. xxiv, No. 2, April, 1902.) Crothers.

In this paper the author has put together some general observations suggested by his exceptional experience in the treatment of the inebriate. It is noteworthy that, on the whole, his attitude is distinctly optimistic. In the first place he pleads for more discrimination

of cases. He distinguishes three classes of inebriates : (1) paroxysmal cases, where there are often premonitory symptoms in change of character, morbid impulses, etc., treatment of which may abort the attack ; (2) delusional inebriates with mental exaltation, which may be prodromal to general paralysis ; for such cases rest and change with eliminative and subsequently tonic treatment are indicated ; and (3) senile and demented cases.

Crothers attaches a high value to treatment by suggestion, but holds that, at least in its simple form, it is never sufficient alone to effect a cure. He insists on the need of supplementing it by drugs and physical methods, having as their end—first, the promotion of elimination by skin, bowel, and kidneys ; and secondly, the re-establishment of nervous tone. For the latter purpose strychnine is the most useful agent amongst drugs.

Regarding the home treatment of cases of delirium tremens, the author advocates the use of massage and hot baths with mild purgation in the early stages, and is strongly opposed to the exhibition of narcotics. He adds a word of warning, by no means superfluous, against the dangers of over-feeding in the early stages of the attack ; at this time the risk of exhaustion is usually small compared with that of further poisoning the patient with products of intestinal fermentation.

W. C. SULLIVAN.

The Suppression of Salts of Chlorine from the Diet in the Treatment of Epilepsy by Bromides [*La diète hypochlorinée dans le traitement bromique de l'épilepsie*]. (*Rev. de Psychiat.*, No. 4, April, 1902.) Cappelletti and D'Ormea.

The authors give the results of their treatment of epileptics by the method suggested by Richet and Toulouse, according to whom diminution of the excess of chlorides present in the organism favours the curative action of bromide salts in epilepsy without disturbing appreciably the normal physiological metabolism. They experimented on twenty patients, eleven men and nine women, who were taking from 45 to 120 grains of bromide *per diem*. Chlorine was suppressed from the diet. They noted the number of crises during the six months preceding this special treatment, during the forty days of treatment, and during the two months following. A brief history of each case is given. No objection to the treatment occurred on the part of the patients. Their general conclusions may be thus summarised :

(1) The diet suggested by Richet and Toulouse has a marked effect, and is undoubtedly efficacious, with regard to the number, severity, and duration of the convulsive seizures ; (2) this diet produces no appreciable harm ; (3) the psychical condition is often improved under this method of treatment ; (4) the general nutrition improves in the majority of cases ; (5) the suppression of the treatment by diet does not do away, at all events for some time, with the improvement observed, and causes no exacerbation of the convulsive attacks, even when suddenly effected ; (6) the return to a diet including chlorides does not improve the condition of the general nutrition. The authors give tables showing the number of attacks during treatment, body-weights, etc.

H. J. MACEVOY.

The Bed Treatment of Chronic Insane Patients [*Ueber die Bettbehandlung bei chronischen Psychosen*]. (*Allgem. Zeits. für Psychiat., Band lxx, Heft 1.*) Würth, A.

The author observes that the treatment of acute cases of insanity by confinement to bed has made good progress, in spite of criticism, during the last ten years.

Dr. Würth determined to try this method upon chronic excited patients. At the end of the first quarter he had a hundred patients under treatment. He considers the result encouraging. He found that out of sixty-three patients so treated, thirty lost weight, twenty-eight gained, and five remained as they were. He found that excited patients became quieter under this treatment, and that acts of violence or the desire to tear and destroy were much lessened, so that restraint, isolation, or narcotics were not so much called for.

WILLIAM W. IRELAND.

7. Sociology.

Criminal Sociology [*La Sociologie criminelle*]. (*Rev. de l'Hyp., May and June, 1902.*) Niceforo.

In this lecture, delivered before the University of Lausanne, the author defines the issues between the old classic school of penology and the modern scientific spirit.

It is the eternal opposition of the metaphysical and the positivist methods. "The classic school has created the modern penal codes; it has restricted itself to building abstract theories of crime. The positivist school has created criminal sociology; it has sought to study the criminal, the criminal environment, the prison, and, above all, it has sought for practical methods of prevention." The classic school, founded on the doctrine of free will, had taken form before the positivist method had revolutionised the natural sciences, and in its subsequent evolution it had remained voluntarily ignorant of the new conception of crime which has necessarily followed from the progress of experimental psychology and psychiatry. The modern school, on the contrary, takes its origin from these sciences; it brings to the study of the criminal the experimental method; it sees in crime, as in every other human act, not the expression of free will, but the resultant of the organic constitution of the individual and of his social and physical environment; and, studying that organic constitution, it finds in the criminal the characters of degeneracy. So envisaged, the scope of criminal sociology may be outlined as follows:

1. Causes of crime.

Physical causes.—Sociogeography: relations of the criminal to climate, latitude, altitude, soil, etc.

Individual causes.—(a) Criminal anthropology: study of the cranial, skeletal, visceral, etc., characters of criminals; (b) criminal psychology: study of the emotions and intelligence in criminals; the physiological psychology of the criminal.

Social causes.—Criminal statistics : study by the statistical method of the relations between the social *milieu* and the criminal.

2. Criterion and means of repression.

(a) Criterion and means of repression : study of responsibility, of the idea of crime, and of penal action.

(b) Means of repression : study of the different systems (elimination and correction) applied by the law to criminals.

3. Criminal polity.

(a) Preventive : the prophylaxis of crime.

(b) Repressive : study of the treatment of the criminal in the institutions to which the repressive law consigns him. W. C. SULLIVAN.

Criminal Suggestion in a Paretic Alcoholic [*Suggestione criminale in alcoolista paresico*]. (*Arch. di Psichiat.*, vol. xxiii, fasc. 4, 5, 1902.) Lombroso.

This is the report of a case of great medico-legal interest.

The body of a murdered man was discovered in a well adjoining a cabin belonging to two brothers Fissore, and by a complete chain of circumstantial evidence the crime was brought home beyond doubt to the elder of the brothers, and a reasonable probability of the other's complicity was established. At the trial the elder Fissore, who up to this had denied the charge, confessed that he was guilty, but asserted that his brother was innocent, and named as his real accomplices in the murder two other individuals, alleging further that the crime was undertaken at the instigation of a prostitute. These persons were accordingly arrested ; the woman and one of the men accused, who had hitherto had an excellent character, denied absolutely any knowledge of the affair, but the third prisoner, an individual named Martinengo, after for a time protesting his innocence, at the fourth examination, after a month's detention in prison, admitted that he was guilty, corroborated Fissore's evidence, and added details to it. On fuller investigation, however, it turned out that Fissore's story was a tissue of lies. A conclusive alibi was proved in regard to the three individuals whom he accused, and in Martinengo's case it was further shown that at the time of the crime of which he acknowledged himself guilty he was actually laid up with neuritis and an injury to the foot. Eventually any remaining doubt was cleared up by the confession of the younger Fissore. The self-accusation of Martinengo was, therefore, clearly the result of suggestion ; the reiterated assertions of Fissore, the questions of the *juge d'instruction* and of the police, operating on his feeble brain, created the belief in his own guilt, and this idea he elaborated with that tendency to pathological lying which is usual in the weak-minded. Martinengo was, in fact, a chronic alcoholic with symptoms—pupillary inequality, slow and tremulous speech, modified reflexes, etc.—of organic brain changes. He was very demented, with a tendency to optimism. His evidence, though apparently accepted for a time by the judicial authorities, gave ample proof, in its variations and inconsistencies, of his morbid mental state.

This curious incident of false testimony as a result of suggestion is the chief interest of the case ; but some other points are also worthy of

note. The existence, for instance, of insanity, crime, suicide, and alcoholism in the family history of the assassins, and the physical and mental stigmata of degeneracy which these individuals bore, afford a good example of the pathological basis and affinities of the criminal character. These points are well brought out in Lombroso's interesting analysis of the case.

W. C. SULLIVAN.

The Relation of Alcoholism to Tuberculosis. (Quarterly Journal of Inebriety, vol. xxiv, No. 2, April, 1902.) Kelynack.

The author shortly reviews the opinions which have been held regarding the relationship of alcoholism to tubercular disease. There are three possible views, and each has had its advocates: (1) that alcoholism is antagonistic to tuberculosis; (2) that alcoholism has no special relationship to tuberculosis; (3) that alcoholism definitely predisposes to tuberculosis. The last view is that which at present tends to prevail, and the most reliable sort of evidence—that afforded by the pathological study of a large mass of cases—is strongly in its favour. For instance, in ten fatal cases of alcoholic polyneuritis the author found pulmonary tuberculosis in eight. And examination of the records of the Manchester Royal Infirmary showed evidence of tubercular disease in 23 *per cent.* of the fatal cases of common hepatic cirrhosis.

In the author's experience the tubercular processes, as met with in alcoholics, do not present any special or exceptional features.

The peculiar liability of alcoholics to tubercle is in part to be ascribed to their impaired vitality, but is even more importantly related to the unhygienic conditions of public-houses, which in these countries must be amongst the most dangerous agents for the spread of infection. A practical corollary to be drawn from these facts is that outdoor labour and special precautions against tubercular infection are essential in institutions for the care of the inebriate.

W. C. SULLIVAN.

Superfluous Autopsies [Ueber überflüssige Sectionen]. (Arch. für Kriminalanthropologie, Bd. viii.) Kornfeld.

This paper has, at least, the quality of the unusual. It is a protest from a criminologist of repute against the holding of *post-mortem* examinations in cases where the cause of death can be inferred with reasonable probability from other evidence. The author is particularly opposed to the provision of the Prussian law which requires autopsies for legal purposes to be performed by two doctors in the presence of a magistrate. The grounds of objection appear to be partly sentimental and partly economical. If such a thing were conceivable about a German professor, one might suspect a ponderous *jeu d'esprit*.

W. C. SULLIVAN.

Notes and News.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

THE GENERAL MEETING was held at the Rooms of the Association, 11, Chandos Street, Cavendish Square, W., on November 20th, 1902, under the presidency of Dr. J. Wigglesworth.

Present.—A. J. Alliot, W. Lloyd Andriezen, Henry T. S. Aveline, Horatio Barnett, Fletcher Beach, H. A. Benham, George F. Blandford, Charles H. Bond, David Bower, A. N. Boycott, A. H. Boys, G. Braine-Hartnell, J. F. Briscoe, P. E. Campbell, Herbert N. Cappe, James Chambers, J. W. S. Christie, Robert H. Cole, John B. Cook, Sydney Coupland, Maurice Craig, William Douglas, Charles C. Easterbrook, F. W. Edridge-Green, Charles Edwards, Francis H. Edwards, G. Stanley Elliott, James W. Evans, Wm. J. Farquharson, David Ferrier, David Fleck, Edwin Goodall, Horace E. Haynes, J. Carlyle Johnstone, Robert Jones (Sec.), Walter S. Kay, Harold A. Kidd, Percival Langdon-Down, Reginald Langdon-Down, Henry C. MacBryan, P. W. Macdonald, T. W. Macdowell, S. R. Macphail, H. J. Manning, Charles A. Mercier, William J. Mickle, Alfred Miller, W. B. Morton, F. W. Mott, James Neil, A. S. Newington, H. Hayes Newington (Treasurer), Edwin S. Pasmore, Robert N. Paton, Bedford Pierce, Henry Rayner, J. Peeke Richards, William Roots, Edward H. O. Sankey, W. J. Seward, James Scott, G. E. Shuttleworth, R. Percy Smith, J. Beveridge Spence, R. C. Stewart, R. J. Stilwell, F. J. Stuart, D. G. Thomson, Alex. R. Urquhart, George A. Watson, Lionel A. Weatherly, Ernest W. White, James R. Whitwell, Joseph Wigglesworth (President), Henry F. Winslow, T. Outterson Wood, David Yellowlees.

Apologies for non-attendance were received from Drs. James M. Moody, Adam R. Turnbull, and E. B. Whitcombe.

The following visitors were present:—P. Beecher, Sir William H. Broadbent, Bart., Thomas Buzzard, Sir William S. Church, Bart., Sir William R. Gowers, C. Juler, M. Squire, James M. Swainson, Richard D. Sweeting, Jas. Taylor, Sir John Batty Tuke, M.P., R. J. Wicksteed (Canada).

The following candidates were elected ordinary members:—Collie, Robert John, M.D., Assistant Medical Officer, School Board for London, 25, Porchester Terrace, Hyde Park, W. (proposed by S. Rutherford Macphail, R. N. Paton, and Robert Jones); Green, Philip Anthony Mark, M.R.C.S., L.R.C.P., Assistant Medical Officer, Claybury Asylum, Woodford Bridge, Essex (proposed by F. W. Mott, J. S. Bolton, and Robert Jones); Greene, George Waters, B.A. Cantab., M.R.C.S., L.R.C.P., Assistant Medical Officer, Claybury Asylum, Woodford Bridge, Essex (proposed by F. W. Mott, T. E. Ewart, and Robert Jones).

SANITY AND INSANITY—LUNACY AND LAW.

An address on this subject was delivered by Sir William Gowers. This address is printed in full in the *British Medical Journal* and the *Lancet* of November 22nd, 1902. An abstract of it is appended:—

SIR WILLIAM GOWERS, after some introductory remarks, said that the special subject which he desired to bring before them was the harmful influence of the present Law of Lunacy in so far as concerned patients taken in private for treatment. The ostensible object of the law was the personal safety of the subject. To ensure this it is decreed that all persons of unsound mind shall be treated alike, certified as insane, deprived of liberty, and placed under the control of the Commissioners in Lunacy. No distinction is made as to the nature of the case, the needlessness or harmfulness of the proceeding. Thereby injustice and injury are done far exceeding that which the law can prevent. One criterion only is adopted—the technical evidence of mental unsoundness; one condition only deter-

mines its application—whether the care of the patient was paid for. The conditions are the same for the most harmless patient and the most dangerous. Yet any person, however violent, may remain uncertified in his own house, or under the care of those on whom he is dependent; but no other person, even a relative, may take a patient for payment without certification. Besides the many cases of mental unsoundness for whom the process of certification is needless and sometimes harmful, there is the large class of border-line cases, patients on the verge of insanity, some just over it. Many of them may recover, but they may be actually rendered insane by the process of being declared so, which certification constitutes. Such cases are very numerous. Three examples were mentioned. In one, a harmless delusion was the residue of a graver state, but made the patient technically unsound in mind. The law was broken by a doctor who received him into his house. In a fortnight the patient was quite well, and he has continued so now for six months. Had the law been complied with, the distress would certainly have greatly retarded the improvement, and perhaps would have prevented it altogether. In another case a harmless delusion prevented a patient obtaining a much needed change. An aunt who desired to take her could only do so on payment; she had been a nurse, and knew the law, and dared not run the risk. In a third case mentioned great strain in private life had recently brought a single woman to the verge of unsoundness, perhaps over it. She had an intense dread of going out of her mind. Under the care of a lady, who ran the risk of prosecution by taking her, she steadily improved. To have had her certified according to the law would probably have made her definitely insane.

It was well to consider what the process of certification is to the patient. The nearest relation must undergo the pain of signing a request that the patient shall be "detained and taken care of as a lunatic, idiot, or person of unsound mind." The last term is generally chosen, but it is well known to be synonymous with the first. Then follows an examination by two doctors, separately, who have, with such tact as they possess, to probe the inner secrets of the mind and find out any delusion and the degree and character of any depression. Each has to make a declaration to the effect just mentioned. These documents are presented to a justice of the peace, who has power personally to examine the patient, happily not often exerted. Then follows removal to someone's care, a virtual imprisonment under the Commissioners until they release. The nature of the process cannot be concealed from many patients, and is most clear to those to whom it is most harmful. Too many on the brink of insanity are always haunted by the question "Shall I go mad?" To them it sounds the knell of hope, for it gives the answer "You are mad." If the present law were strictly carried out, it would cause a large increase in the number of the insane by destroying the chance of recovery which is often secured by breaking it.

It is a monstrous thing that the interest of the patient should be absolutely without influence in deciding whether certification should take place. That it is needless matters not; that it is harmful matters not. According to the law it depends solely upon technical evidence of mental unsoundness, upon what is essentially a legal point.

Why was this regulation made? The great fear was that the sane should be treated as insane, but this cannot be prevented by compelling all insane persons to be treated alike. It doubtless arose from a desire to guard against ill-treatment by placing all insane persons under the supervision of the Commissioners, but the danger of ill-treatment of those for whom there is payment is small. The cases of ill-treatment have been chiefly by those on whom the patients were dependent, and for these the law makes no regulation. Instances of ill-treatment of the weak-minded by those who received them for payment have been very rare, and of other forms of insanity almost unknown. A patient can leave or be taken away at any time. The present law actually does more harm than it prevents, and if strictly enforced it would do vastly more harm. That which constitutes the hardship is that it compels the compulsory certification of every case, however needless it may be, as a condition for the skilled care which can only be obtained for payment.

All the security the present law can give, and more, would be ensured, and all its harmful effects would be avoided by a system of notification. Let the law remain as it is for cases in which certification is necessary in the real interest of the patient;

but for all cases in which this process seems unnecessary, and especially in early cases, in which there is so often a prospect of recovery, and all border-line cases, substitute the following system. Let every one who receives such a case inform the Commissioners within a certain time. Let them, or some one deputed by them, visit the patient, and enjoin certification, if necessary in the patient's interest. The visit could be repeated, and information should be given when the patient passed from care. But let the well-being of the patient, and the safety of others, be the only criteria. For justice' sake, for right's sake, abolish once and for all the artificial standard of technical mental unsoundness as determining the proceeding. It might involve an increase in the number of the Commissioners, but this is needed for other reasons. To give a large number of cases their best chance of recovery, the law must be constantly broken, with grave risk of prosecution to those who take charge of such. They feel that a sword is ever above them, hanging by what seems a thread.

The injustice of the present law is shown conspicuously by some of the prosecutions for its infraction, for the "illegal charge of cases" which the Commissioners are obliged to undertake. Several examples of these were given from the reports of the Commissioners. In one, an old lady was bedridden from paralysis of all her limbs, due to brain disease, which had also caused delusions. She was well cared for in the house of a doctor. Information was received by the Commissioners, perhaps from some discharged nurse, and the doctor was prosecuted, convicted, and fined. The unhappy lady, at the instigation of the Commissioners, was certified as a lunatic, removed, and placed under other care. Again, a lady in a nursing home at York had to be certified and moved to an asylum. She had been in the home for three months in the hope that the treatment there might do good. In consequence, the lady manager of the home, and the nurse also (though there was no allegation of ill-treatment), were prosecuted, convicted, and fined. A patient was received by a lady in an East coast town who, in a few days, wrote to the friends that the case was too serious for her, but, because a month elapsed before the patient could be transferred under certificates to an asylum, the lady was prosecuted. The Justices seem to have had no choice but to convict, although their common sense prevailed, and they only told the lady to come up for judgment when called on. In other cases of prosecution there was no pretence of need, so far as the patient was concerned, but a professional opinion of technical mental unsoundness ensured conviction.

In Scotland the law is far more reasonable and humane; any patient, either on the verge of insanity or definitely insane, can be taken uncertified for six months, "with a view to recovery," on a simple medical recommendation. The system answers well, and prosecutions seem unknown.

How vast is the work of the medical Commissioners the Reports show. They have their own responsibility for all the insane under their supervision. They are three, the same in number as when they were first ordained in 1845. The number of the insane under them is not known before 1859; it was then 36,700. Now it is 110,700; so it is not likely in 1845 to have exceeded 27,000. There would be then one medical Commissioner to 9000 cases, and now there is one to 36,000. If the original proportion was right (and more supervision is exacted now than then), there should, at the present time, be twelve medical Commissioners instead of three. In Scotland there are now two for 15,800 insane, and the same proportion would involve fourteen for England and Wales. Doubtless the work of the three legal Commissioners has correspondingly increased, but it is less in evidence. Besides the six Commissioners there are five other legal members of the Board which presides over this vast department of disease. Surely these are grounds for a thorough examination of the work and organisation. Other subjects also press for consideration. The need for hospitals to receive border-line cases has often been urged, and is unquestionably great. The time has certainly come when a Royal Commission should investigate both the work and constitution of the Board of Lunacy, the working of the Lunacy Act, some remedy for its unjust and harmful effects, and the need for other provisions than those it affords. The time—twelve years—which has elapsed since that Act was passed has furnished ample experience of its effect and deficiency. But a thorough investigation must of necessity take time. Meanwhile should this hardship be unrelieved? It is earnestly to be desired that as a temporary measure

either the Scottish system should be made legal, or, what would perhaps be simpler, the following brief enactment should be passed—so obviously right and just that it could scarcely meet with opposition,—an enactment that “the provisions of the Lunacy Act relating to private patients taken for payment should apply only to such cases as, in the judgment of the Commissioners, need to be certified and detained in their own interest or for the safety of others.”

The head of the Board of Lunacy is the first lawyer of the kingdom, and at the present time he is such not only by position but in reality, and is one who has also a sense of what is right and just so keen that an adequate appeal to him cannot be in vain. Vast and multifarious as is his work, so great is the trust in the Lord Chancellor that the Lunacy Act was passed through both Houses of Parliament in 1890 without discussion, as Hansard shows. But even the Lord Chancellor is beneath the law, and grave indeed is the responsibility of the Legislature. If its members having eyes saw not what was outside their range of vision, they were free from blame; but if, having ears they now hear not what is testified by those who see, is not their condemnation written?

Finally, Sir W. Gowers said that he had taken the opportunity of bringing the subject forward under a compulsory sense of duty. He might fail, and indeed could succeed only by arousing the efforts of others, but failure could not be for long; no grave injustice, once perceived, remains long unredressed.

THE PRESIDENT.—I am sure that we owe a very special debt of gratitude to Sir William Gowers for his exceedingly able, exceedingly interesting, and extremely important address. I think it is greatly to our advantage, and I hope I may say our mutual advantage, that hospital physicians should at times come amongst us and give us the benefit of their experience on subjects with which we are specially concerned. The tendency of our speciality is to be too narrow, and anything which will lift us out of that and give us an interchange of ideas with general physicians is greatly to be desired. There is no question about the social importance of this subject, and I hope that the discussion we shall have this afternoon will not be altogether nugatory, but will lead to some action being taken. I must at once express my personal agreement with a great deal of what Sir William Gowers has said. I think that there are many cases, not merely border-line cases—to which I think he did not confine himself—but cases of really definite insanity which are capable of being certified, and are habitually certified, but in which it is quite unnecessary to certify, and which might be treated without certification to the advantage of the individual. Asylum men do not see many of those cases. I have myself had personal experience of some of them, and I have known persons definitely certifiable who have been under care without certification, whose surroundings under private care without being certified were everything that could be desired; and yet, the patients being certifiable, it was illegal to detain them under those surroundings. I will not, however, take up your time by quoting my own experiences. We are honoured this afternoon by the presence of some very distinguished physicians, and I am sure we shall be very glad to have the opinions of those gentlemen upon this question, as hospital physicians see more of these cases than asylum men do. We shall be very pleased to hear Sir William Church if he will give us the benefit of his experience on this subject.

SIR WILLIAM CHURCH.—**MR. PRESIDENT AND GENTLEMEN,**—Until I came into this room I had no idea that I should be called upon by you to speak first on the matter which we are now going to discuss. It is one of very great importance, but one with which I cannot claim to have much personal acquaintance. In fact, I came here to learn rather than to express any opinion of my own. Sir William Gowers, to whom we are indebted for the very interesting and forcible manner in which he has brought the subject before us to-day, was kind enough to send me beforehand a copy of most of that which he has delivered this evening, and since I received it I have endeavoured to make myself better acquainted with the subject than I was before. I think all of us who have been in general practice, or who have been in consulting practice as physicians, have recognised from time to time the great hesitation and difficulty with which we act in what Sir William Gowers so well calls border-line cases. I myself have always had a most wholesome dread of being in any way mixed up with them, and have wished to keep myself as clear as possible of such cases. But in the course of one's life one has met with many, and I must say that Sir

William Gowers has seemed to me to make a very strong case for our trying to get some alteration in the existing laws with regard to certification. I think the strongest argument that he brought forward is that in the neighbouring country of Scotland the law seems to be much more reasonable, and he tells us that the result is good. That seems to me a very strong argument for our requesting some change in the certification of lunacy in this country. If the profession in this country finds that there are, as undoubtedly I take it all who have any knowledge of these cases admit, great defects in the certification of what are called people of unsound mind and those on the borderland, and we hear from our professional brethren over the border, where a six months' grace is given, their difficulties are less, a very good case for reform is established. By this six months rule—I speak under correction—most of those cases which make a good and complete recovery have recovered before there is compulsory certification; that is to say, a person who has not recovered his mental balance in six months is apt, as far as my own ignorance of the matter goes, not to recover for a long time. Therefore, when we are told by our professional brethren over the border that these six months of grace act well, we have very strong grounds for requesting that we shall have the same period of grace, or that some other means of effecting the same purpose is given us. For it must be most inadvisable, not to use a stronger term, for us wilfully to infringe the law. Our profession is one which touches so closely upon the life of the nation that we ought to be most particular never to go beyond the letter of the law, so that those who wish to detract from us can never lay a finger upon any spot, however small, and say, "There, you are not doing what is right; you have broken the law." And, therefore, although we cannot but regard—I was going to say with admiration—those who are willing to run the risk of making themselves martyrs, it is not a right thing to do; and, although Sir William Gowers and many in this room probably have done so, I am clearly of opinion that it is wrong for any of our profession to infringe the law in any way whatever. That seems to me another very strong argument for asking that the law with regard to certification shall be modified and amended. Very likely I may be going to tell you what many know much more about than myself, but since this matter has been brought to my attention, and since I have felt it my duty to interest myself more or less in the matter, I have been making some inquiries, and I find that at the present moment the Lord Chancellor has got a Bill for amending the Lunacy Act in his pocket, and that it is not owing to any fault or laxity or want of interest in the subject on his part that the Bill has not become law. (Hear, hear.) He has, I think, twice passed it in the House of Lords, and the Government have never found time for it to be brought forward in the Commons. It seems to me, therefore, that now is a most favourable and advantageous time for the profession to approach him. I daresay some in the room may know what the contents of his amending Bill to the Lunacy Act of 1890 may be. I do not know that myself, and have not had the opportunity of finding out, but it does seem to me that now is a very favourable time to approach the Lord Chancellor and find out whether there is anything in the amending Act pointing in the direction of Sir William Gowers' proposal, and if there is not, to bring it to his notice. And I cannot help thinking, from the very slight knowledge I have of him, that anything which would appeal, as I think this would, to his common sense, would be favourably received, and I think he would be willing to introduce it into the Bill.

Dr. GEORGE SAVAGE.—Mr. President and Gentlemen,—I rather hoped that the outsiders—if I may use the term—would have spoken before one so intimately connected with the subject as myself, for I rather hoped that I might have been placed somewhat in the position of one who was summing up. But as I am called upon to speak now I would first of all say that this subject has my most sincere sympathy. I have felt for very many years that some kind of notification is absolutely necessary, and many of you who are here present will remember that in a former deputation, which waited upon the Lord Chancellor some five or six years ago, I was at all events one of the spokesmen; and I was then impressed by the fact that the Lord Chancellor was almost converted to the belief that something in the way of notification, apart from certification, was necessary. Since then, on one or two occasions it has been my duty to give evidence on behalf of some of those who have been prosecuted by the Commissioners. On the occasion of the prosecution of Dr. Broadhurst, who afterwards committed suicide, I maintained that there were

two distinct clauses; that you might certify that a patient was of unsound mind, but that this did not mean necessarily that he was a right and proper person to be detained. The legal people on the other side said, "No; the reading of this certificate is that every person of unsound mind is a person who ought to be detained as a lunatic." It is this chiefly which we wish first to have removed in England, for it is absurd to suppose that every person who is of unsound mind is necessarily a person who ought to be detained; because, after all, insanity is a negation; it is a statement that the person is not sane, and the degrees of that negation vary immensely. I do feel most certainly that Sir William Gowers' suggestion would be for the good of the patient in every way. First I accept the statement that every patient who is seen by a medical man and recognised by him to be of unsound mind, and who cannot be properly treated at home, should be notified as a person so suffering; there would be practically no greater difficulty than there is in notifying smallpox or measles. It is perfectly certain that if such persons were notified and information was given as to the places they were going to be sent to, such places and such people should be visited by some one in authority. That would be essential; and I believe that, instead of it preventing people being sent to asylums who were most fit and proper persons for asylums, it would increase the number of proper asylum patients. What occurs? Every week of my life a patient being on the border-line of insanity is sent into a layman's or a doctor's house, and in a week, or a fortnight, or a month, or three months, the patient gets worse. The doctor or the layman says, "This patient must now be sent away; I cannot keep him any longer. But for goodness' sake don't have him certified from my house." They know that if the patient is certified from the house there will be an inquiry, which may lead to a prosecution. And yet the patient when admitted into that house was not a certifiably insane patient, and, the person who is responsible has done the right thing in notifying the friends that the patient must be removed. But they will do anything rather than run the risk of prosecution. The friends say, "No, we are not going to run the risk. If the patient has to be certified we will see if something else cannot be done"—which means that many of these patients are hidden away. Therefore what is now advocated would be a very great gain. Another thing which is constantly occurring is this. The patient is sent to a private house. Those of us who are in consulting practice and have most to do with insane and nervous people know that one of the first things the friends say is, "You understand my relation is not going to be certified." You say, "Very well, I quite agree with you at present, but you must adopt some definite course of treatment." If Sir William Gowers' plan is followed the patient is sent into a nursing home or a medical man's home, and if an official goes and says, "This patient must be certified," the friends would accept this official statement very much more readily than they would accept the statement from the general practitioner. In fact, general practitioners have a very healthy dread of recommending patients to be certified. Over and over again we hear the same tale, "I recommended at your suggestion that Mrs. So-and-So should be certified, and I have never seen any member of the family since." If there were an official notifier I believe that source of trouble would be removed. I do feel that the Commissioners are doing their very best. (Hear, hear.) I think one has in the Commissioners friends, but one feels that they are overweighted; and one knows that they even recognise our small peccadillos. When one of the legal Commissioners asked me if I was breaking the law as frequently as usual, I said "Yes." He said at once, "We recognise that you consultants do what you believe is best for your patients, and have to disregard the law." And so, rather in opposition to Sir William Church, I would say there are cases where we feel we have to be above the law. But already I have expressed my feelings very, very strongly. It has been said that a larger consumption of whisky is justifiable in Scotland than in England. It does not follow necessarily that everything across the border is the best for everywhere. But I think the fact that a particular enactment has worked there successfully should enable us to press forward for an inquiry. I agree with Sir William Church that it would be just as well to see what the Lord Chancellor has in his pocket before we urge too much of a campaign. But my feelings, I say, are that the time has come for some step to be taken in which notification should replace certification; and I believe that it would be found to answer admirably.

Sir WILLIAM BROADBENT.—Mr. President and Gentlemen,—I am happy to say that my experience in such matters is extremely small, but that has not prevented me from forming a judgment upon the very important question which has been brought before the Society by Sir William Gowers; and I think he has rendered a very important service to the public in general and to the medical profession, not only by bringing the subject forward, but by doing so in such a clear and emphatic manner. He has, I think, struck the true key-note of what should be the guiding principle of legislation for the insane—that no man should be certified unless it be either for his own advantage, or in the interests of the public, or for the safety of the public. When we remember what it is to be certified—that it is practically a sentence of imprisonment much more severe than our worst criminals are exposed to—(No, no);—in the mental suffering involved, which is a very important point—(No, no);—I say in the mental suffering involved, for those who are unsound in mind are sufficiently appreciative of the conditions to which they are exposed when they are mixed with lunatics in general;—I believe it will be seen that their punishment and their sufferings are worse than those of the habitual criminal when he is sent to prison—(Hear, hear, and No, no);—not of course from anything which is inflicted upon them in the asylum, but from the subjective point of view. And when we remember that the fact of any member of a family being sent to an asylum brings a stigma upon the individual, and that even if he gets well his self-respect is wounded for ever, that he can never lift up his head again in society, and that the family is injured in perpetuity, you will see the force of what I say. This question should be tested from the view of the public, and you may depend upon it I am stating what does not go beyond the truth. (Hear, hear). I think we cannot have safeguards too great against the possibility of anyone being pronounced a fit subject for detention and sent to an asylum, unless it is necessary in his own interest or for the safety of the public. For my own part, I had no idea that the law was as strict as it turns out to be; and unconsciously, in the few cases which have come before me, I have no doubt been guilty of an infraction of that law; and, in spite of the authority of the President of the College, I should rather break the law as far as that lay in me than send a patient to an asylum and say that he needed detention, unless the conditions of his own advantage or the public safety required it. Again, I had absolutely no idea that there could go on in England such prosecutions as seem to be imposed by the Lunacy Commissioners. I had no idea that they could enter upon a prosecution and not make public the original source of knowledge. One cannot but be astonished that two systems should have survived side by side as that which prevails in Scotland and that which operates in England, because that in Scotland is very much superior to the law here. One cannot understand how they could have subsisted side by side. Of course the question is very greatly complicated, because many of these mild cases of insanity which do not require to be shut up, many of these border-line cases, many of these weak-minded cases, do require protection in their own interests, and some system of notification, or whatever it may be called, which brings them into the purview of a responsible public authority, which shall prevent them from falling into the hands of unscrupulous men, who prey upon these weak-minded people very often; an authority which shall prevent such injury as has happened several times within my own knowledge—cases of men getting married in the first stage of general paralysis of the insane;—which would prevent men ruining their families in the initial extravagance of that and other diseases. The question is an extremely complicated one, and I think it is most desirable, before any amending Act is passed, that at any rate the Lord Chancellor and the other responsible authorities shall in some way have the fullest possible information on all the complicated questions which are connected with this subject of dealing with those who are unsound in mind, and those who are on the border-line of that condition.

Dr. HAYES NEWINGTON.—I think, Mr. President, I speak the truth when I say that as regards most of what Sir William Gowers has said he has been preaching to very willing ears on the subject of an alteration in lunacy law in the direction he has suggested. And I may say that not only shall we flatter him by following his advice, but we have done him the great flattery of to some extent anticipating it. The Lunacy Bill which the Lord Chancellor had in his pocket contained a provision that if a medical practitioner certifies that a person is suffering from

mental disease—that is not the ordinary terrible certification entailing “imprisonment,” but a document a little more advanced than mere notification—and that the disease is not confirmed, and that it is expedient, with a view to his recovery, that he be placed under the care of a person whose name and address are stated on the certificate for the period therein stated (not exceeding six months), then during that period the provisions of section 315 of the principal Acts shall not apply. The effect of that is that the specific penalties incurred under the statute for unlawful reception are removed, as regards such cases, and the common-law rights mentioned by Sir William Gowers, to receive them, are restored. But that only covers part of the ground, that referring to incipient and curable cases only. I may say that that provision was inserted in this Bill, and accepted by the Lord Chancellor on the representation of a joint committee of this Association and the Parliamentary Committee of the British Medical Association. And we are encouraged so far by the elasticity of the legal mind to hope that we may some time go further. In fact, quite recently—that is, within the last two years—we have addressed the Lord Chancellor on the point, and this is the text of our last communication to him:—“It is also suggested that section 315 of the principal Act shall be amended so that penalties should only apply to a person who regularly receives *and* detains a patient. It occurs sometimes that a person, being of unsound mind, is not sufficiently deranged to justify giving a medical certificate which requires on the part of the certifier a definite opinion that detention under care and treatment is necessary. Such a person may have neither a home nor immediate relatives to receive him, and anyone receiving him to board and lodge would be exposed to prosecution (unless no charge were made), however willing the patient might be to reside.” That is our recommendation. Whether we shall get it accepted or not is a matter of uncertainty; but it goes as far and possibly further than what Sir William Gowers desires. The Act imposes penalties on every person who receives or detains. We propose that the “or” shall be made into “and;” and the only question which would forbid reception would be necessity for detention. I think common sense, and certainly our experience, would say this: that if a person is so ill as to be detained against his will, then the law should step in with a considerable amount of formality. Of course it would be idle to suppose that the law would allow anybody to receive a person, even if he did not require detention, unless there was some provision for giving information to the authorities and for visitation, both of which are recommended by Sir William Gowers. He goes for notification alone; but I do not think it would be possible to stop there. To begin with, mere notification that So-and-So has come to live with the person would be of no avail to the Commissioners. They would probably say, “What has this to do with us?” It would be necessary that the notification should contain some facts, and then the notification would contain at least the germ of a certificate. There is another very strong reason why one would say we must have a definite certification. It would be all very well if the matter were in the hands of gentlemen in the eminent position of Sir William Gowers and others, but it would not be right to place such a power in the hands of everybody, so that they could take patients and board them without some little supervision. (Hear, hear.) And it would further be right to have a certificate, because we must remember that persons needing such treatment are frequently unstable; they may change their opinions as to wishing to reside, and may turn round at any moment on their former hosts, and allege all sorts of things against them. The person who receives on the request of the medical man ought for his protection to have the certificate to the effect not only that that patient was suffering to some extent under mental disease, but that the person should not be detained. That is most important, and I think notification, or whatever you call it, should express an opinion against the necessity for detention. It has been said by Sir William Gowers, and I think by others also—and to some extent rightly—that this might increase the work of the Commissioners indefinitely. I am now speaking entirely on my own responsibility, and I do not think that that follows. The Act of 1890 produced, or started, a large machinery in regard to private cases in the shape of justices specially appointed for the purposes of the Act, who might be made use of for this purpose also. The most important part of the lunacy law is now administered on an order of a Justice of the Peace, who has to take a very serious responsibility. But in the question of the visitation of these borderland

cases, if the real test was simply one of detention, no such responsibility would rest upon him; he would have to judge of one simple matter, on lines perfectly familiar to him when sitting on the bench. He would merely have to satisfy himself that the person was not detained against his will; and I should take it that visitation by a Justice who, as a rule, is not very easily convinced, would be an ample safeguard under such circumstances, because, if he felt the least doubt, he would report to the Commissioners. I do not altogether like to hear the law called harsh or unjust, and in regard to this lunacy law I do not think it is quite proper. We must remember that the lunacy law, as it at present exists, was designed originally to overcome a very serious evil. One hundred years ago there was no lunacy law to speak of; one hundred years ago there was a terrible state of affairs, arising not merely from the brutality and greed of individuals, but from entire absence of healthy public opinion in regard to lunacy. I think I may say that at that time the highest in the land, when they became insane, were treated in a way that would certainly entail prosecution now-a-days, and that was then considered the right way to treat insanity. Then public opinion became aroused, and the law has been altered in obedience to public opinion up to the Act of 1890. And perhaps you will allow me to offer a little correction of what Sir William Gowers said. The Act of 1890 was a mere Consolidating Act, and required very little attention at the hands of Parliament. But the Act which was passed the year before, and which was at once repealed by the Consolidating Act, was passed after much debate for five or six years. This I am certain of from personal watching during these years. It was debated up hill and down hill. This Act having now been in operation several years, I think we can go to the law and say, "You have done your work well; so well that you have abolished malpraxis." And we can almost go as far as saying, "You have not only done that, but you have satisfied public opinion that there is not much wrong." Cases arise now and again, chiefly outside asylums, which arouse public attention, but these, if proved, depend more on personal infraction of the law rather than on failure of the law; and we may say that, outside the jealousy with which everybody must look to the treatment of insanity—a very right jealousy which must always exist—the public are to a great extent satisfied as to the sufficiency of the law. I think further that we can say to the law, "You have succeeded; and now that you have succeeded so well, you can well afford to relax your strictness." In this particular matter I think strictness might well be relaxed, and I should hope that with our own action, backed up, as it is, by the help of such important members of the medical world, we may succeed in persuading the Lord Chancellor to adopt our views on the point.

Dr. YELLOWLEES.—Mr. President and Gentlemen, I had no idea until I listened to Sir William Gowers' paper that matters were so bad in England in this respect as they are; and I share the surprise expressed by Sir William Broadbent that this state of matters should have existed so long after the very different system which obtains in that remote and unknown country called Scotland. I am free to say that for the last fifteen or twenty years this whole matter has been solved there in the most satisfactory way, and with great benefit alike to the patients and to the profession. I think no one in Scotland believes that a person of unsound mind necessarily requires treatment in an asylum; there are two classes of insane persons, those who require asylum care and treatment, and those who do not. These are entirely different categories of patients, and our Legislature in Scotland has dealt with them quite differently. Of the first class, those who require asylum treatment, I need not speak, as they have not been the subject of to-day's paper. But as to the other class, the Legislature has distinctly recognised that they also need care, and has recognised it in two ways. The first method is that of the six months' certificate, which Sir William Gowers has wisely declared to be of the greatest benefit. That it is so I can personally and emphatically testify. The certificate that is given is not only a certificate of illness, but it testifies that the patient does not require asylum care and treatment. The mental illness is treated as any bodily illness might be, by placing the patient, under his ordinary physician, in the circumstances most favourable for recovery, and during six months that course can be followed without let or hindrance from anyone. The certificate is given simply for the protection of the person who receives the patient, so that it might be produced in the event of anyone objecting to the patient residing there.

But—and this has not been spoken of, though it is most important in view of what the paper has touched upon—there is a further and most important provision for another class of cases altogether. The six months' certificate refers only to incipient cases. But there is a large class of confirmed cases, who, while still mentally unsound, do not require care and treatment in an asylum, and for that class also we have ample and wise provision. We have many houses in Scotland recognised and licensed by the Commissioners in Lunacy as suitable places in which such patients can be boarded; the certificate given for such cases testifies that the patient, although of unsound mind, is not dangerous to himself or others, and does not require treatment in an asylum. On receiving such a certificate the Lunacy Commissioners grant their sanction to the residence of the patient in the particular house selected, and the patient may remain there for years and years, subject only to a visit every three months from his own medical attendant or from the local practitioner, who must report in a book kept in the house for this purpose as to the condition and care of the patient and the suitability of his surroundings; and subject also to visitation and inspection at any time by the Commissioners or by their deputies, to whom the visitation book must be submitted. This arrangement secures, I believe, perfectly sufficient and satisfactory care for such cases. And there has never been, during all my experience, any difficulty in Scotland either as regards the care of the incipient cases during the six months, or the care of those harmless chronic cases boarded out in these private houses. It seems to me that this, as I have described it, meets completely all the necessities of the case, and the sooner you have it in England the better. I may add that it was at the instigation and with the cordial approval of our Scottish Commissioners that these provisions were made, and I do not understand why the English Commissioners do not themselves take an active part in introducing them here.

Sir JOHN BATTY TUKE.—Mr. President and Gentlemen, My friend Dr. Yellowlees has so completely taken the wind out of my sails by the admirable statement of our Scottish law which he has made that I feel I have very little to say. He stated the case exactly. The patient under the six months' certificate is never certified to be insane; his name is never recorded in the books of the General Board, and he is entirely under the care, as he ought to be, of his own family medical attendant. The whole responsibility in the matter is thrown upon him. The certificate only protects the householder who received the patient. Now, this has worked with us admirably, and I think I am not very far from the mark when I say that about one half of all patients coming from the monied classes—well-to-do classes—are treated in that way. The consequence is, I believe, that we have only a very small increase, if any, in the number of private cases in asylums, from the simple fact that a large proportion of incipient and mild cases are cured by treatment at home and under the six months' certificate, and, of course, never bear after recovery anything like what is generally considered the stigma of lunacy. But, sir, it must be recollected that we live under very different conditions in Scotland to those under which you live here in England. Scotland is a small country, and everybody knows everybody else, and we have—and I hope in saying so I shall not be hurting the feelings of any person here—an efficient Board of Lunacy. The public requires the assurance of an efficient Board of Lunacy to carry out such a scheme as the one we are considering. For about 10,000 patients we have four Commissioners in Lunacy,—that is to say, two Commissioners and two deputy Commissioners. In England you have three medical Commissioners for something over 100,000 patients. How can there be any elasticity in a system in which the men who work out the law are obliged to work without anything like elasticity? It is impossible. I think I express the feeling of the public in Scotland when I say that there exists north of the Tweed a sense of perfect security and safety, and as high a feeling amongst the public for lunatic hospitals as there is for medical hospitals and infirmaries. (Hear, hear.) To bring about the same state of matters in England you require that country to be broken up into six or eight districts, with resident Commissioners in each. Such officers working in a limited area could, like the Scottish Commissioners, be in close touch with all the neighbouring hospitals for the insane, and, in fact, know each patient by headmark. Sir William Church said he did not exactly understand why there should be a difference of law in England and in Scotland. The main reason is that the English law arose out of a series of what may be spoken of as regrettable incidents which

occurred a hundred years ago. Our Scottish law had a different origin. It arose not from asylum scandals, but from the bad provision for a certain number of pauper patients in pauper private asylums. We had been blessed for one hundred years with those noble institutions the Royal Asylums of Scotland, which provided for a large number of the insane. But it was discovered that a certain number of pauper lunatics were very badly provided for, and a law was made with regard to them, and district asylums were established. Thus the origin of the lunacy laws in the two countries was entirely different. One was merely to improve the condition of the insane, the other was conceived in a spirit of suspicion; and I think if we look upon the law under which you now work we shall find that that suspicion is not dissipated. I fear that you in England will have some considerable difficulty in getting a provision such as we have in Scotland until that suspicion is removed, especially from the legal mind, and until you have convinced the law officers of the Crown that they have to depend much more on the good faith and the honour of those honourable and upright practitioners of medicine who administer the law in asylums than on any provision that can be enacted by the law itself. I think, sir, it would be opportune at the present moment to make a very strong representation from this Association on the matter, backed up by the leaders of the profession throughout England. And I can only say, if in my own small way I can be of any service to you in promoting that object, I shall be only too happy to do so. (Loud applause.)

Dr. DAVID FERRIER.—Sir, I am very unwilling to take up the time of the meeting unnecessarily, as I think we are all pretty much agreed on the main points. But I should like to say, as a physician and neurologist, that I am in thorough agreement with all that Sir William Gowers has said on this subject. I am convinced that the law as it at present stands is exceedingly harsh and cruel; and, at the risk of incurring the censure of my president and of my official self, as censor, I confess I feel justified, in the best interests of my patients, in frequently transgressing the law, or aiding and abetting in the transgression of it. In the class of cases which Sir William Gowers has alluded to it is exceedingly cruel to stigmatise the patient by certifying him as insane, for though it ought not to be so, it is unquestionably commonly regarded as a stigma, and we ought to prevent that to the best of our ability. If we could get the English law assimilated to that of Scotland, or even if the law could be modified by the insertion of the clause Dr. Hayes Newington has alluded to, I think the main defects would be removed. Therefore I hope this Society and all who are interested in this matter will urge the Government to pass the new Act as soon as possible.

Dr. BLANDFORD.—I have very little to add to what has been said already. I agree with all Sir William Gowers has said on the subject. I only wish to remind you and all the gentlemen who are here that this subject has been before our Association for a considerable number of years. I have attended a great many meetings on the subject, meetings of our own Parliamentary Committee and the Parliamentary Committee of the British Medical Association. We have at those meetings thrashed this subject out at very considerable length, and we went to the Lord Chancellor and recommended to him that provision which they have in Scotland, and we carried him and his opinion with us to the extent that the clause which we drafted, based upon the Scottish law, he introduced into his Bill without any alteration whatsoever. (Hear, hear.) That Bill was brought in, I think, for the first time in the year 1899, and passed the House of Lords. It was brought in again in the next year, and, I think, passed the House of Lords, but it went to the Commons, and there it stopped. And that is our difficulty, gentlemen. You know it is all very well to come here and talk about alterations in the law, but you have to get those alterations made. The Lords have plenty of time, and they go into the matter and send a Bill to the House of Commons; but the Commons have got an Education Bill, or something of that kind on hand, and the Bill goes down to the end of the Session, and then gets swamped. I have no doubt that when we have this next Bill we shall have a somewhat similar clause inserted, and what we really have to do is to get that Bill made an Act. We cannot pass Acts of Parliament ourselves, however desirable we may think them. To get an Act of that kind passed through the House of Commons is an extremely difficult matter. I daresay some of you may remember how that Bill which was passed in 1889, and was eventually consolidated in 1890, took years to go through the

House of Commons. It was referred to the Committee of Law, and I there heard it discussed at very great length, and it did eventually become law; but, as I say, it took years to accomplish it. All I can say in conclusion is that I beg of you to do your utmost among the members of Parliament with whom you may be acquainted to get such a clause as this passed in an Act of Parliament during the next session.

Dr. RAYNER.—Sir, I wish to thank Sir William Gowers for having brought forward this subject so admirably. It is a matter in which I have been interested for some years, having read a paper on the same lines at Carlisle in 1896, when a resolution was passed which led to the formation of a joint committee of the British Medical and Medico-Psychological Associations, with the result that a clause founded on the Scottish clause, but adding notification to the Commissioners, was submitted to the Lord Chancellor, who adopted it in his Bill. The clause which the Lord Chancellor has adopted very fairly meets the case; but we have also to consider another side of the question, and that is, to try and get properly qualified and experienced people to take charge of the patient. Considerable dangers and difficulties may arise from unskilful treatment if large numbers of the incipient insane are treated under this proposed clause. At present, however, we might try to get this greater freedom of treatment. When we have obtained it we can consider what regulations are required for getting the right kind of people to take charge of these cases in suitable houses. At the present time one comes across cases which have been placed under quite the wrong kind of person, and with quite unsuitable house accommodation.

Dr. MERCIER.—Sir, Sir William Broadbent and Dr. Yellowlees have expressed surprise that the law of England could be so different, with respect to the detention of persons of unsound mind, from the law of Scotland. This law cannot be properly understood unless we have some regard to its history. The intense prejudice against asylums, the stigma of insanity, as it is called, was due entirely to that obstructive Scotchman Lord Eldon, that luminary of the law who for many years obstructed every reform. The law, previous to the Act of 1889, was exceedingly satisfactory; it worked from the year 1845 to 1884 with perfect satisfaction to all concerned. (Dr. Blandford: Hear, hear.) But in 1884 there occurred a *cause célèbre* to which I will direct your attention. A certain lady—a very attractive lady, a very clever lady, and a somewhat eccentric lady (Mrs. Weldon)—was considered by her friends to be a proper person to be detained under care and treatment; and they applied to Dr. Winslow to aid them in this respect. He made the attempt, and the attempt failed. It failed disastrously and ignominiously, and Mrs. Weldon remained mistress of the situation. She brought actions in the Court of King's Bench against Dr. Winslow, against Dr. Semple, against Sir Henry de Bathe, and she was awarded £500 damages against Dr. Winslow, £1000 against Dr. Semple, and, I think, another £1000 against Sir Henry de Bathe. Well, the public clamoured for an alteration in the law. They said that the law was not strong enough; that anybody might be seized and taken to an asylum under the law as it existed. They seemed to imagine that asylums sent out pressgangs in order to knock people down in the streets and carry them off to asylums. A more illogical outcry it would be impossible to conceive. Mrs. Weldon was not detained for a single hour. The attempt to place her under detention absolutely failed, and for that attempt the persons who made the attempt were practically ruined. It was as if John Bull had possessed a safe, in which he locked up that inestimable jewel or fetish of his, "the liberty of the subject," and it was as if burglars had made an attempt to open the safe, with the consequence that the jewel or fetish remained perfectly secure, but that the burglars had £2500 taken out of their pockets and transferred to the pockets of the custodian of the safe. Most people would have considered that an instrument like that was worth preserving, that such an apparatus was good enough. Not so John Bull; he was in a panic, and when he is in a panic it is no use appealing to such reason as he possesses. And the clamour for an alteration in the law was so loud and persistent that the Government of the day had to yield. Well, the consequence of that was that we had the law as it at present exists. It was as if John Bull said, "This safe of mine is not good enough; I must have a new safe, with a gun attachment to it, so that if a burglar makes an attempt upon it it will shoot him." And he went to the Legislature, and he got his new safe made with its gun attachment. And John Bull has gone to sleep, and the

gun is going off and maiming and mutilating innocent passers-by. But John Bull does not care about that. The picture would not be complete unless we remember that this safe has no back to it, and that anybody can go round to the back and take out that fetish and pound it up; and John Bull will look on approvingly and shout, "Well done!" Anybody who remembers the case of Mrs. Cartwright, which was tried a few months ago before the House of Lords, will understand what I mean. In regard to the existence of the evil, I should be in agreement with Sir William Gowers and others who have spoken; but in regard to the mode of remedying it I should not be in agreement with him. I am no advocate for resorting to the Legislature for remedying grievances. In my own opinion—in which I fear that, as usual, I am in a minority of one—the proper function of the Legislature is to supervise and control the expenditure of the country, and when it exceeds its proper function and embarks upon legislation it usually does mischief. Every mechanic knows that if a defect exists in a machine, and you attempt to remove that defect by some alteration *ad hoc*, you usually, if you remedy that defect, introduce half a dozen others which you did not expect. It is so with the Legislature. If it attempts to remedy grievances by legislation *ad hoc* it generally, as in this case, introduces other evils which it neither foresaw nor expected. I think in this case, as in other cases, we should not appeal to the Legislature to help us until we have done what we can to help ourselves. I do not see that it is necessary to have an Act of Parliament to insert that word "not," which Sir William Gowers speaks of, in the certificates. I submit it is open to us all, when we give a certificate, to say that the patient is of unsound mind and is not a proper person to be detained under care and treatment. It is true that Sir William Gowers regards "the second part of that clause as essentially connected with the first," and it is true, moreover, that Dr. Savage has told us that the legal authorities who advise the Commissioners have the same opinion. I do not give my own opinion upon a legal point; that would be worthless, but, in venturing to question the validity of these dicta, I am not without authority for what I say. In one of the numerous trials of Weldon against Winslow, Mr. Justice Manisty, sitting with Mr. Justice Watkin Williams, in a Divisional Court, made remarks as follows:—He read the statutory documents which were produced, and in the statement of particulars he read, "'Whether dangerous;—doubtful.' That," he said, "is the whole question. Everything depended upon that. For," he said, "it is not every harmless eccentricity or delusion which renders it necessary to place a person in confinement; it is not even every delusion which incapacitates from making a will or contract. The statute required a certificate not only that the party was unsound in his mind, but in a state which required detention;" and therefore the Court set aside the non-suit, and ordered a new trial. And upon that the judgment in the Court below was upset. It was taken to the Court of Appeal, and that judgment was confirmed by the Court of Appeal, by three very strong judges, the then Master of the Rolls and Lords Justices Bowen and Fry. And therefore I say there is considerable authority for my view that those two clauses in that sentence are to be regarded as separate; and that it is open to us to give a certificate that a person is of unsound mind but is *not* a fit person to be detained under care and treatment. And, armed with such a certificate as that, I maintain that the person who for payment receives the patient need not fear prosecution, for already magistrates and juries are by no means eager to convict. On the contrary, even where the law has been flagrantly violated, it is not at all easy to obtain a conviction. And, armed with such a document as that, I say no conviction could be secured, and no prosecution would be undertaken. We should then be able to address the Legislature as Dr. Johnson addressed Lord Chesterfield; we could say, "I hope it is no very cynical asperity to confess to no obligation where no benefit has been received, nor to be unwilling that the public should ascribe that to a patron which Providence has enabled me to do for myself." With regard to the peculiar phrase which our Scottish friends are unable to understand, the phrase in the Act—"lunatic or alleged lunatic"—perhaps I may relate a little incident which occurred last night to show what a very peculiar condition this law is in. It happened yesterday evening that I was in the Hôtel Métropole with my good friends Dr. Urquhart and Dr. Carlyle Johnstone. And it happened, in some extraordinary and unaccountable and unprecedented manner, that a difference of opinion arose

between Dr. Carlyle Johnstone and myself. Well, Dr. Urquhart intervened in the discussion. Evidently Dr. Urquhart saw that I was right; but we know Dr. Urquhart's tender heart, and his patriotism and loyalty, and that he is not the man to see a fellow-countryman getting the worst of it without intervening on his behalf. And Dr. Urquhart used a phrase which I have no doubt he has since regretted, and the effect of which I have no doubt he did not appreciate at the time. But the spoken word cannot be recalled. He spoke to me in these terms—"Why, Mercier, you are getting demented." Now, if the terms of the Act are to be severely construed in their literal sense, Dr. Urquhart has rendered the directors of the Gordon Hotels Company, Limited, and I do not know whether he has not rendered the whole of the shareholders also, liable to prosecution, for they were for payment receiving, to board and lodge, an "alleged lunatic."

Dr. ERNEST WHITE.—Mr. President and Gentlemen, You have already heard so much on the subject before us this afternoon that I will not detain you long. But you know I am connected with an institution which receives now over one hundred private patients annually, and of these no small number come from single care. Dr. Rayner touched the chord which appealed to me, and that is, that those having charge of these people must be suitable and skilled, and trained in the care and treatment of the insane; otherwise the patients under single care go there merely to be housed, and to drift into chronic insanity. We know all our patients in rate-paid and private institutions are thoroughly well fed and clothed, but it is the influence of skilled people which is to counteract moral obliquity amongst the insane, even in the earliest stage of their disease. I refer to those bad habits which are, unfortunately, very marked amongst the more civilised and highly-educated classes of the community, far more than I ever found them in the old days amongst agricultural labourers and the industrial classes. You must bear carefully in mind that the nurses having charge of these people should be thoroughly trained in mental work, and should be the proper people to take charge of patients, not merely with regard to their care, but having in view their recovery also. The medical men who are in attendance on these patients must be thoroughly trained in the treatment of mental disease. Otherwise your patient is merely put under care, and the very object you have in view—recovery—is lost. The chief advantages of single care, I presume, are to preserve secrecy and to give greater domesticity to your patient. I know of no other advantages. There are many disadvantages, for there is the monotony of the life, the being under the charge of a lady who knows nothing of the care of the insane. There is the want of the complete school discipline, as I would call that discipline which brings your patient into line with natural life, where the day is apportioned out—so much for pleasure and recreation, so much for work or occupation, and so much for meals—so that the patient is taken out of himself or herself. And all that is most important in single care, as in institution life. It is the very essence of our success in many cases. There must be the school discipline to correct the moral obliquity and bad habits which are so common. Self-abuse amongst the educated classes of the insane community is very common, far more so than amongst the lower classes. I have been very much struck during the last ten years with the enormous difference in the proportion of immoral habits among private insane patients compared with the pauper or rate-paid patients, with whose habits I have for many years past been so thoroughly conversant.

Dr. URQUHART.—May I say a word upon this question? I would merely declare that, as far as this Association is concerned, our withers are unwrung. We have listened to Sir William Gowers with due attention, but he must remember that we have for long called upon the general physicians of the country to come and aid us in this matter. (Hear, hear.) As you have been reminded, in this Association and in the British Medical Association we have been no laggards in trying to induce the Legislature to give facilities for the adequate treatment of incipient insanity in private care. And I would emphasise what Dr. White has said, that if we indicate private care we mean medical treatment, active treatment by a medical man in a medical spirit. It is absolutely useless to us to have our patients stowed away in back parlours and left there to rot mentally. (Applause.) For myself, I represent an institution which, fortunately, has at command every kind of house suitable for the medical care of the insane, and therefore I am in a position to place patients either in separate care or in institutional care, according

to the state of mind in which they are. I am not restricted by licence. If I find that a patient is better placed in a separate house, if I am assured that the morbid introspection which private care so often engenders will not be encouraged, I may so place him with one or two skilled nurses. But, remember, that is an expensive affair. It is only comparatively few persons, in Scotland at any rate, who can afford eight or ten guineas a week to be so treated adequately, and command that attention and nursing and medical skill that is essential for one who is on the verge of declared insanity. I lately treated a patient in one of our detached houses. She declared, "I shall never be well until you take me into the asylum." She went from bad to worse until she had to be brought into the asylum, where she rapidly recovered. This was done at the expense of the "stigma" of the lunatic asylum. We hear a great deal too much about stigmata, and one becomes rather impatient of the iteration. Another case: We received from a doctor's house in the West End of London a young gentleman, who had been condemned to a back parlour existence for months, with the result that he, too, very soon recovered. Being brought face to face with the facts of life, and being told that he was insane, and that he must be properly treated, in his own interests, we have had the satisfaction of knowing that he in due time passed well into Sandhurst, and that he has been serving his country ever since. These are facts, illustrating the other side of the case, which might easily be multiplied by every one here, and which we cannot forget. We should deal with these cases in hospitals for the insane, discriminating between the patients suitable for asylum or for private treatment in the first instance, but always from the point of view of the physician, doing what is best for the person in the particular circumstances in which he is found. That is our test, and if we have, in the past, given our authority and our influence to enlarge the sphere of private care in England, it is with the proviso that private care shall only be employed when it is the right and adequate course for the patient. It is the individual patient we have to do with; every other question is subsidiary to that.

Dr. ROBERT JONES.—I rise to say a few words of thanks, and to express, as an official of this Society, how much indebted I am personally to Sir William Gowers for his paper. Anything Sir William Gowers says exacts attention. He is the possessor of a style which we all admire, and he has attacked this question with great point and frankness. He has refused to bend the knee to a law which is unjust, and I feel sure that the Lunacy Commissioners will help us if necessary to have this pressing question fully considered.

The PRESIDENT.—Before asking for a reply, I should like to congratulate the Association upon the exceedingly important discussion which has taken place, and it would be a great pity if it were allowed to remain without action being taken. (Hear, hear.) We are not in a position to pass any definite resolution; there is nothing to that effect on the agenda, and therefore we cannot pass a resolution making a definite recommendation. But I propose that the matter be referred to the Parliamentary Committee, for them to consider it and take any action which may be thought fit. (Applause.) If that meets with your approval we will take that course.—Agreed.

Sir WILLIAM GOWERS.—I have only to express my keen sense of the manner in which my effort has been received. There is little in what has been said which calls even for a semblance of a reply. I think I might make a trifling correction of Dr. Hayes Newington by saying that he may search the pages of *Hansard*, not only in 1890, but in 1889 also, without finding anything like a semblance of real discussion; for I have been through every volume of *Hansard* for 1889. There was a little discussion in 1888, but not in 1889. With regard to the remarks of Dr. Mercier, it is rather curious that I struck out of my address the remark that I should very much like to know what would be the effect of sending a certificate with the word "not" inserted, to the Commissioners, but that I apprehended the result might be a visit of a superintendent of police. I am sorry if I have not done justice in this address to previous efforts of the Society. I knew a good deal about them, but I thought that more effect might be produced by a somewhat fresh impetus, and if I am successful in exciting the efforts of others, and I hope I may be, I shall feel amply rewarded.

The remainder of the agenda was, by consent, postponed.

The members afterwards dined together at the Café Royal, Regent Street, W.

COUNCIL MEETING.

The Council met on the same day, and the following members were present:—Dr. Wigglesworth (President), Drs. Yellowlees, A. R. Urquhart, H. Hayes Newington, A. Miller, P. W. MacDonald, R. L. Rutherford, Maurice Craig, A. N. Boycott, G. Braine-Hartnell, J. B. Spence, H. A. Kidd, R. C. Stewart, C. H. Bond, L. A. Weatherly, H. Rayner, and Robert Jones.

NORTHERN AND MIDLAND DIVISION.

The Autumn Meeting was held at the Cleveland Asylum, Middlesbrough, on October 8th.

Members present:—Drs. H. G. D. Brockman, J. T. Calcott, J. Tregelles Hingston, C. K. Hitchcock, H. W. Kershaw, S. W. McDowall, Alfred Miller, James Middlemass, Bedford Pierce, G. Stevens Pope, J. B. Tighe, E. A. Trevelyan, H. J. Mackenzie. Visitors:—Drs. J. Hedley, J.P., Francis Townsend, and Samuel Walker, J.P.

Dr. G. Stevens Pope having been voted to the chair, the minutes of the previous meeting were read and adopted. The amended rules were considered, especially those more immediately concerning the divisions of the Association; the following alterations were unanimously adopted, and the Hon. Secretary was requested to forward a copy of these to the General Secretary to lay before the Revision Committee; he was also requested to forward a copy to the various divisional secretaries.

Rule 28.—In place of second paragraph, "Each division shall nominate annually to the Council, after taking a vote of the division, a member to act as secretary to the division, also one member as their representative on the Council. Such nomination to be received by the Council and presented to the Annual Meeting."

Rule 34.—To strike out "and two Auditors."

Rule 35.—To add after the word "Committee," "and the Divisional Secretaries."

Rule 46.—To replace "by the Auditors," by "by two Auditors elected by the Council from their number."

Rule 51.—To add as fresh paragraphs between present paragraphs "c" and "d," "the names of the Secretary and of the Member of the Division nominated for the Council."

An invitation from Dr. Menzies to hold the next meeting at Cheddleton was unanimously accepted.

Dr. BEDFORD PIERCE read a paper entitled "The Arrangements for Nursing in Institutions for the Insane, and the Training of the Staff" (see page 37).

Dr. POPE showed plans of the asylum new buildings.

The members were entertained at luncheon and dinner by Dr. Pope. A hearty vote of thanks was accorded him for his hospitality and for his conduct in the chair.

SOUTH-WESTERN DIVISION.

The Autumn Meeting was held at the Devon County Asylum, on October 28th, under the chairmanship of Dr. Davis. There were also present Drs. Rutherford, Miller, Benham, Aveline, MacBryan, Bullen, Stevens, Stewart, Turner, Eager, Baskin, Rorie, Laval, and the Hon. Sec., Dr. P. W. Macdonald.

The three following candidates were elected ordinary members:—Frederick Day Welch, M.R.C.S., L.R.C.P.Lond., A.M.O. Burghill Asylum, Hereford; A. Alwyne Hingston, B.A.Cambs., M.B., C.M.Aberd., A.M.O. Cotford Asylum, Taunton; and Evariste Laval, M.B., C.M.Edin., A.M.O. Brislington House, Bristol.

On the proposition of Dr. TURNER, seconded by Dr. STEWART, Dr. Benham's invitation to hold the Spring Meeting at the City Asylum, Bristol, was accepted unanimously.

Dr. BENHAM said he would be very pleased to receive the Division next April. He wished to say how much he appreciated the vote they were kind enough to pass at the last meeting when he was laid aside through illness. He was glad to say that after a long rest he had been able to return to his duties, and, he hoped, for some considerable time to come. He was also greatly indebted for the great amount of sympathy he received, not only from the members of that Division, but from the whole of his brother medical men in other Divisions of the Association. He would never forget the kindness that was displayed towards him through his illness, and he only hoped that he would be spared for some considerable time to attend the various meetings of the Division.

In accordance with the resolution passed at the Annual Meeting, the rules were next considered, and, after a very full discussion, several important amendments were unanimously agreed to, and the Hon. Sec. was instructed to forward the same to the Rules Committee.

Dr. BASKIN then read a most instructive paper on "Some Aspects of Phthisis in the Insane; with Notes on the Urea Treatment of Phthisis" (see page 52). Owing to the late hour it was not possible for any discussion to take place.

The members dined afterwards at Pople's new London Hotel.

SOUTH-EASTERN DIVISION.

The Autumn Meeting of the South-Eastern Division was held by the courtesy of Dr. Seymour Tuke and Mr. C. M. Tuke at Chiswick House, Chiswick. W., on Wednesday, October 29th, 1902.

Among those present were Drs. Bond, Bower, Benson Cooke, Chambers, P. Campbell, F. G. Crookshank, R. H. Cole, P. Langdon-Down, F. H. Edwards, C. Edwards, G. S. Elliott, Lieut.-Col. J. W. Evans, Drs. Fee, Gostwyck, J. R. Hill, Hyslop, Haslett, Haynes, Higginson, Kidd, Wolseley Lewis, Miller, Moore, Macevoy, A. S. Newington, J. P. Richards, Steen, Shuttleworth, R. J. Stilwell, T. Seymour Tuke, Thomson, H. F. Winslow, Ernest White, Worth, and Boycott (Hon. Sec.). Visitors: Messrs. F. W. Tuke, W. F. Chevers, F. H. Lloyd, and Ogilvie.

After luncheon a meeting of the Divisional Committee was held, and the house and grounds were inspected.

The General Meeting of the Division was held in the afternoon, Dr. Seymour Tuke being voted to the chair.

The minutes of the last meeting, having already appeared in the JOURNAL, were taken as read and confirmed.

An invitation from Dr. Harding to hold the Spring Meeting of the Division at Berrywood, Northampton, in April, 1903, was unanimously accepted with much pleasure.

The following gentlemen were by ballot elected ordinary members of the Association:—Laurence Otway Fuller, M.R.C.S.Eng., L.R.C.P.Lond., Assistant Medical Officer, Darenth Asylum (proposed by Drs. Taylor, Robinson, and Boycott); Saville Waldron Hanbury, M.R.C.S.Eng., L.R.C.P.Lond., Assistant Medical Officer, London County Asylum, Banstead (proposed by Drs. Wolseley Lewis, Johnston Jones, and Murphy); Patrick Gabriel Kennedy, L.R.C.P.&S.Edin., L.F.P.S.Glasg., Assistant Medical Officer, London County Asylum, Banstead (proposed by Drs. Wolseley Lewis, Johnston Jones, and Murphy); Charles Seymour Parker, M.R.C.S.Eng., L.R.C.P.Lond., Assistant Medical Officer, Darenth Asylum (proposed by Drs. Taylor, Robinson, and Boycott); Ernest Frederick Sall, M.R.C.S.Eng., L.R.C.P.Lond., Assistant Medical Officer, West Sussex County Asylum, Chichester (proposed by Drs. Kidd, Steen, and Boycott).

The amended and revised Rules of the Association, as submitted to the Annual Meeting at Liverpool and by resolutions referred to the Divisions, were considered.

With reference to Rule 28, the following resolutions were carried:

(1) Proposed by Dr. Douglas, seconded by Dr. Bower:—"That each Division shall appoint annually a member to act as Honorary Secretary to the Division."

(2) Proposed by Dr. Bower, seconded by Dr. Richards:—"That in the opinion

of this Division the Rules should provide for proportionate representation of the Divisions on the Council."

(3) Proposed by Dr. White, seconded by Dr. Lewis:—"That it is the opinion of this Division that each Division should nominate a representative or representatives upon the Council. Such name or names to be submitted to the Annual Meeting for election." An amendment proposed by Dr. Bower:—"That the present practice of suggesting names should be continued," was not carried.

Concerning the remainder of the Rules the following resolutions were passed:—

(4) Rule 35.—After the word "Committee," add the words "and the Divisional Secretaries."

(5) Rule 51.—Add a paragraph as follows:—"(*e*) The names of the Members nominated as Honorary Secretary and Representatives of the Division on the Council."

(6) Rule 67.—Add after the word "year" the following words:—"Unless he can satisfy the Council that his absence was unavoidable."

(7) Appendix, Form D:—Omit the word "*President*" underlined in black.

A letter was read from Dr. Bond, the Honorary Secretary to the Committee for revising the Statistical Tables, asking the Division to communicate to him any suggestions on the subject which they might think desirable. It was decided to consider this matter at the Spring Meeting.

A paper was read by Dr. Seymour Tuke and Mr. C. M. Tuke on "Work at the Manor House and Chiswick House." Photographs and engravings of Chiswick House and grounds in the old times were passed round for inspection.

The Hon. Secretary reported that Drs. Corner and Pugh were unavoidably prevented from attending the meeting, and their papers were postponed.

A hearty vote of thanks was accorded to Dr. Seymour Tuke and Mr. C. M. Tuke for entertaining the Division at Chiswick House, as was also a vote of thanks to Dr. Tuke for presiding in the chair.

The members afterwards dined together at the Café Monico, Regent Street. Drs. Alliott, Savage, and T. O. Wood, who were unable to be at the meeting, were present at the dinner.

IRISH DIVISION.

A meeting was held at the Royal College of Physicians, Dublin, on November 25th, 1902.

Dr. Conolly Norman occupied the chair, and there were also present Drs. M. J. Nolan, A. Finegan, Revington, Oakshott, T. A. Greene, M. Curran, H. M. Eustace, and W. R. Dawson (Hon. Sec.).

The minutes of the previous meeting were read, confirmed, and signed.

DATE OF NEXT MEETING.

It was decided that the next meeting of the Division should be held in Dublin about the middle or end of January, 1903, the exact date to be fixed later.

ELECTION OF ORDINARY MEMBERS.

The following were unanimously elected:—M. J. Forde, M.D., M.Ch., R.U.I., Assistant Medical Officer, Richmond Asylum, Dublin (proposed by Drs. Conolly Norman, J. M. Redington, and W. R. Dawson); and W. Cooke, L.R.C.P.I., L.R.C.S.I., Assistant Medical Officer, St. Patrick's Hospital, James Street, Dublin (proposed by Drs. R. R. Leeper, C. Norman, and W. R. Dawson).

REVISION OF RULES.

The General Secretary's communication with reference to the revision of the rules having been read, a prolonged discussion of various suggested amendments took place, in which all the members present joined. Ultimately the following resolutions were adopted:

(1) Rule 28.—For second paragraph read:—"Each Division shall nominate

annually to the Council a member to act as Secretary, and also one member as their representative on the Council, absent members being entitled to vote for the latter."

(2) Rule 34.—Omit the words "and two Auditors." Rule 46.—Replace words "by the Auditors" by the words "by two Auditors elected by the Council, but not from their number."

(3) Rule 35.—After the word "Committee" add "and the Divisional Secretaries."

(4) Rule 51.—To stand as it is.

(5) Rule 67.—Insert between the words "year" and "and," "unless he can satisfy the Council that his absence has been unavoidable."

(6) Rule 77.—After the second word "vacancy" insert the words "except in the case of a Divisional Representative."

(7) Rule 101.—To stand as underlined.

(8) That "Articles of Association" should be separated from "Bye-laws," and that the Association should obtain in the former power to alter and amend the "Bye-laws" consistently with the Articles of Association. The Articles of Association should be printed separately from the Bye-laws.

(9) That, with the exceptions above indicated, the draft rules as forwarded to the members are approved.

The Secretary was directed to ascertain whether or not copies of the JOURNAL were sent to the Corresponding Members, and to express the opinion of the meeting that, if not, this should be done.

HOOR OF MEETING.

The Secretary was instructed to ascertain the views of the members of the Division with reference to holding the Divisional Meetings at a later hour than has been customary.

COMMUNICATION.

Dr. M. J. Nolan read a paper entitled "Clinical and Pathological Notes," which was illustrated with photographs and microscopic preparations.

A number of the members dined together at the Dolphin Hotel, Dublin.

COMPLIMENTARY.

DINNER AND PRESENTATION TO DR. YELLOWLEES IN GLASGOW AND UNVEILING OF MEDALLION PORTRAIT AT GARTNAVEL.

Dr. Yellowlees' retirement from the position of Physician Superintendent of the Glasgow Royal Asylum has not been allowed to pass unnoticed by his friends, but has been commemorated in a most appropriate and well-deserved manner.

It was resolved to entertain Doctor and Mrs. Yellowlees at dinner, to present them with a service of plate, and to place in Gartnavel a permanent memorial of him in the form of a medallion portrait in metal.

The response to the invitations to assist in so honouring him was most cordial and gratifying, and on the 31st day of January, 1902, Doctor and Mrs. Yellowlees were the guests of over eighty of their friends in the Central Station Hotel, Glasgow. Sir James Marwick was in the chair, and among the alienist physicians present were Sir John Sibbald, Sir J. Batty Tuke, Drs. Clouston, Rutherford, Urquhart, Havelock, Robertson, Keay, Carlyle Johnstone, Turnbull, Oswald, and Parker. The medical profession of Glasgow was represented by Sir Hector Cameron, Professor McCall Anderson, Dr. Finlayson, Dr. Renton, Professor Glaister, Dr. McVail, and many others. The University and City of Glasgow were also well represented.

Apologies for absence, accompanied in many cases by expressions of keen regret, were intimated from many English asylum physicians, and from among others the Commissioners in Lunacy for Scotland, Sir Arthur Mitchell, the Very Reverend Principal Story, Sir Charles Cameron, and Professor McKendrick.

Sir W. T. Gairdner wrote as follows:—"There are few men living to whom I should more earnestly have desired to show honour and respect, but the opinion

of my medical advisers is altogether opposed to my undertaking any kind of evening social engagement even here in Edinburgh for some time to come. I believe I have the distinction of being about the oldest of Dr. Yellowlees' friends in the West of Scotland, and also of having been very intimate with him from the time of his studentship, when I believe I was more or less the means of his having his attention directed to the special branch of medicine in which he has gained so great a reputation. I can most thankfully and heartily bear witness that during all that long time not a single cloud has ever passed over our friendship, nor have I ever entertained a misgiving as to the wisdom of the choice originally made by him in selecting lunacy practice as the work of his life. It is needless to add that as the medical superintendent of Gartnavel he has more than fulfilled the expectations of his earlier friends, and has presented to all the world the example of a strong, sane, and yet human-hearted physician in contact with infirm and disordered minds, with constant sympathy and healing influence as regards the latter. But above all the impression of Dr. Yellowlees that I would like to give effect to in this letter is that his character as a public man is exactly what we, his intimate friends, know in private—a man of unswerving honour, absolute fidelity and truthfulness, warm in his affections, and constant to his friends, yet full of courage and resolution, *justum et tenacem prepositi virum*."

Sir JAMES MARWICK, in proposing the toast of "Our Guests," sketched briefly Dr. Yellowlees' early professional career, his work in England and Wales, and the events that led to his appointment to Gartnavel. He dwelt on his own long personal friendship with Dr. Yellowlees as one to whom "as the shadows lengthen along the furrows" he clung with ever deepening affection and regard. He bore eloquent witness to the administrative and financial success of the asylum under Dr. Yellowlees' superintendence, and to the deep interest taken by him in many philanthropic schemes. "His all-round sympathetic work," he said, "has gained for him an amount of respect and affection of which the gathering here to-night is but an indication. It is pleasant to think that we, his Glasgow friends, are not to lose him, that the city in those varied interests with which Dr. Yellowlees has hitherto associated himself will probably receive even more of his active sympathy than his engagements hitherto have enabled him to give, and that his long and varied experience will still be available to those who may need to consult him professionally. In any case, the duties and activities of life, the pleasures of home and family, and the associations and enjoyments of friends, are available to him. That in these, and in the solacements of wife and children ministering to his happiness and calling forth his deepest sympathies, he may spend the many years of a yet long and useful life we all most earnestly hope and pray."

Sir James then, in the name of friends in Glasgow, Edinburgh, and throughout the country, presented to Dr. and Mrs. Yellowlees a silver tea and coffee service, a gift that had been specially chosen so that they might be joint recipients of the expression of their friends' feelings towards them.

Sir JOHN SIBBALD said he felt it a great honour to be allowed to say a few words indicative of the respect and affection with which he regarded Dr. Yellowlees. "It is now," he said, "nearly half a century since I was first made acquainted with Dr. Yellowlees. We were young then, and we looked into the unknown land of the future not knowing the roads we might have to travel; but of one thing I felt always certain, that David Yellowlees, in whatever direction he might be led, would command the respect and confidence of his associates, and would do honour to the vigorous race from which he sprang. I am sure, however, that not in his wildest dreams did Dr. Yellowlees contemplate that towards the end of his career there would be a meeting such as this, where ladies and gentlemen representative of the culture of Glasgow, and other friends from different parts of Scotland, would be joined in such numbers and so heartily in the desire to do him honour."

Having referred to Dr. Yellowlees' early professional career in Edinburgh, to his work in Wales and Glasgow, to the honours conferred on him by the University of Glasgow and by his professional brethren, Sir John said he saw in those present the concrete fulfilment of the anticipation with which all who knew Dr. Yellowlees regarded his appointment to Gartnavel, and he congratulated him and the charming lady who shared his honours and his joys on the happy event of the evening.

Lord Dean of Guild GOURLAY, as representing the Directors of the Glasgow Royal Asylum, expressed the regret with which the Board of Directors had received Dr. Yellowlees' resignation. He desired warmly to acknowledge the debt Gartnavel owed to their guest, and to join heartily in what had been said regarding his high attainments. He, Dr. Gourlay, had been associated with Dr. Yellowlees for many years, and he expressed his own great pleasure and that of his fellow-directors at the intention to place in Gartnavel a medallion portrait of one who had served the institution so long and so faithfully.

Dr. YELLOWLEES, in replying, said: Sir James Marwick, Ladies and Gentlemen,—my kind and valued friends,—It is said that out of the abundance of the heart the mouth speaketh. My experience is just the contrary. I find that the heart may be so full that utterance becomes very difficult.

Since sitting down at this table I have been trying, and it has not been easy, to realise that this great gathering and this magnificent gift have anything to do with me; and while listening to the far too kind and flattering words spoken by yourself, sir, by Dr. Gourlay, and by my old friend and colleague, Sir John Sibbald, I almost began to doubt my own identity. I was forcibly reminded of an old Glasgow citizen, who, amid similar laudation, had to fall back on the Shorter Catechism, and tell his friends that "No mere man since the fall has been able perfectly to keep the commandments of God, but doth daily break them in thought, word, and deed." This amazing and utterly undreamt of demonstration makes me very humble as well as very proud—very proud because of your exceeding kindness and appreciation, and very humble because I feel so little worthy of it. I cannot feel that I have done anything to deserve such a tribute. God gave me one of His best blessings in giving me as my life's work, work that was entirely congenial. My daily duty, notwithstanding all its worries and responsibilities, was my daily joy, and so I did it with all my heart and all my energy, and never, never dreamt of any such recognition as this. I wish I could go back again and try to do it all better.

Your speech, sir, brought back the long-ago days when I came to Glasgow, and it is quite true that, humanly speaking, but for you and good Sir James Watson, I would never have been at Gartnavel. I knew only four persons when I came to Glasgow as a candidate, and when I compare that small beginning with this large assembly, I feel that I have indeed been given in abundant measure what the aged king sighed for in vain—"love, honour, and troops of friends."

The inducements which led me to come from South Wales to Glasgow were the wider sphere of work which it offered, the prospect of teaching in its university, and the more congenial associations and surroundings of my Homeland. In all these respects I have reason to be most thankful that the "Divinity which shapes our ends" led me to Glasgow. My life and work here have been happy and successful far beyond my deserts, and you are crowning them to-night by kindness which overwhelms me.

Dr. Gourlay's most kind words were in accord with all my experience of the Gartnavel directors. I may confess that my chief anxiety in coming to Gartnavel was as to the kind of men with whom I was to work, but I need not tell you that this anxiety soon vanished when I found on the Board such men as George Thomson, John Roxburgh, and John Brown, jun. Their successors are like them. From first to last it has been a true pleasure and satisfaction to work under such directors. They believed in my earnest devotion to the work, and they helped me in it by their confidence, support, and kindness in every possible way. They have done me further honour by appointing me honorary consulting physician to the asylum, and by desiring that I should become a director of the institution.

It is peculiarly touching and gratifying to me that your munificent kindness includes a medallion on the walls of Gartnavel, and that the directors, through Dr. Gourlay, have so cordially welcomed its erection. Nothing could be more pleasing to my own feelings than some memorial of my work at Gartnavel. I should not like to be speedily forgotten where I lived so long, and where so much of my work was done, and I am glad to think that many of my friends both among the patients and the staff will see the visage of their old doctor on the walls, and will like to see it.

The too kind words of my friend Sir John Sibbald awakened echoes of yet earlier memories, for we were assistants together in Morningside more than forty

years ago, and have been friends ever since. Assuredly, as he said, such an honour as this had no place among my wildest youthful aspirations, and his own well-deserved title was as little thought of then. He has anticipated me in saying, what I feel strongly, that our whole specialty is being honoured to-night. It is a very great pleasure to see here so many superintendents from the other asylums of Scotland. They have come not from the west only, but from Dumfries and Melrose in the south, from Inverness and Perth in the north, from the kingdom of Fife in the east, from Edinburgh, and from Larbert, feeling, I am sure, as I do, that in honouring so highly one of their number you do signal honour to that branch of the medical profession to which they and I belong.

I greatly regret that the state of his health has not permitted Sir William Gairdner, my old teacher and lifelong friend, to be with us to-night. The letter you have read from him has moved me deeply, and I wish I were more worthy of such words from such a man.

Were this a fitting occasion, I could say much about the changes I have seen in the care and treatment of the insane during the forty-one years I have spent among them. Perhaps the change is most marked among the insane poor. Forty years ago, although the cruelties of earlier days had ceased, their rooms were still bare and comfortless, their airing grounds were like prison yards, and their diet poor and meagre. Their bread was butterless, and I well remember a patient who, during service, audibly supplemented the fourth petition by "And butter, and butter." Now the condition of the insane poor is a triumph of practical Christianity. They are housed, fed, and surrounded with comforts and elegances as they never could have been but for their insanity. The feeling of the public towards insanity has also changed greatly. It is no longer regarded as a doom and a horror, but as a disease involving no more reproach or blame than other diseases. A good illustration of this change is found in the Gartnavel gate. When the asylum was built the entrance gate was deliberately placed in a back lane for the sake of privacy, and because no one would wish to be seen going to such a place. Now public opinion is wiser, and the gateway is the most handsome entrance on the principal avenue to the second city of the Empire. Now that I have got to the gate I fear to enter on any retrospect of my work, lest I know not where to stop. There have been 5083 patients under my care at Gartnavel during the last twenty-seven years. Of these 1636 recovered completely and 1349 others recovered sufficiently to return to home and friends.

In 1874 there were 167 private patients and 422 parish patients. At the close of 1902 there were 431 private patients and practically no paupers. In 1874 the lowest rate at which private patients were admitted was £57 a year. Now over 200 of the private patients pay only £40 a year, and some of them much less. This immense boon to the community directly fulfils the benevolent object for which the asylum was founded, and I have always felt it a great privilege to be the instrument in administering such a charity. This charity is of necessity limited by the available funds, and money could not be better bestowed than in aiding this most beneficent work. The asylum needs no aid for itself, it is a self-supporting charity, although it has no income except the board paid by patients, and the interest on invested funds. I do not know why ordinary infirmaries should not receive paying guests as well as brain infirmaries. The patients would of course be attended by their own doctors, but with the advantage of consultation and nursing by the infirmary staff.

As to finance, Gartnavel, I am glad to say, has been prosperous. A debt of £11,000 which rested on the buildings in 1874 has been paid off, a reserve fund of £34,000 has been accumulated, and the institution owns the site on which it stands, which is worth at least £100,000.

I resigned the work I loved so well with great regret, and solely because my eyesight had become unequal to it. Such work requires the full activity of all the faculties of both mind and body, and my dimmed vision made my duty clear.

A novel and welcome feature of the dinner to-night to which I cannot but allude is the presence of ladies, who add so greatly to the brightness and pleasure of the evening. I have been bantered on the subject, and told that a dinner to me would not be complete without ladies. I met the banter by cordially accepting it. It has been my privilege and happiness to have many true and dear women friends, and I know of no influence more refining, elevating, and delightful than the

friendship of a good woman. The presence of ladies this evening is a special pleasure to me.

For this magnificent gift before me, I desire to thank you most sincerely in my wife's name as well as my own. You have included her in it, and she well deserves the recognition. She has ever been my earnest helper in all my work at Gartnavel. In short, she has been an ideal wife for an asylum superintendent. Your beautiful present is not only a great gratification to ourselves, it will be an heirloom for our children, and will ever remind them of the exceeding kindness of our friends when we left the dear old home at Gartnavel.

I need not say more; I cannot find words to express what I feel about this great gathering and your most generous gifts. I can only thank you with all my heart.

The unveiling of the medallion portrait referred to took place at Gartnavel on October 7th, and was performed by Sir James Marwick in the presence of 300 guests, among whom were many members of the medical profession, including Sir W. T. Gairdner. The medallion—a striking likeness—is placed in the wall of the recreation hall of the East House. It is a profile in oxidised silver set in a marble tablet, and was executed by Mr. Gilbert Bayes, of London.

Lord Provost CHISHOLM, who presided, referred to the feelings of respect, admiration, and affection which, through a long series of years, had gathered round Dr. Yellowlees, and to the debt which the City of Glasgow owed to him as one of its skilful physicians.

Sir JAMES MARWICK, in unveiling the portrait, asked the directors of the asylum to accept it and to allow it to remain on the wall as a memorial of one who had served the institution for twenty-seven years with fidelity, distinguished ability, and success.

Dr. GOURLAY, as the senior director of the asylum, thanked them most heartily for the happy thought and the generosity of which it was the outcome in placing on the walls of the asylum a work of art, a thing of beauty in itself, and a portrait of one who for so many years had been the trusted adviser of all those who found a home in that beneficent institution.

Sir JOHN SIBBALD said that the memorial of Dr. Yellowlees which would dwell most in their minds was the Royal Asylum at Gartnavel, and the impressions which had been left on the hearts and minds of all who had been associated with Dr. Yellowlees in his work.

Dr. YELLOWLEES, in returning thanks for a replica of the medallion, presented in the name of the subscribers by Professor McKendrick to Mrs. Yellowlees, said the kindness of his friends and professional brethren had awakened feelings which it was altogether impossible to express in words. He could only say that he had always tried to do his duty, and that in spite of all its anxieties and responsibilities his work was always more a joy than a burden. If during these twenty-seven years he had lessened the sorrows and troubles of his patients, and if he had been able to increase the prosperity of that noble institution, it would not matter whether his work seemed obscure and unobtrusive rather than ornamental and conspicuous. The medallion at least secured that he would not be easily forgotten. He would try to be worthy of the kindness that placed it there.

A vote of thanks to the sculptor, proposed by Sir John Cuthbertson, was followed by a programme of music, and the proceedings terminated.

FLOWER'S PATENT AUTOMATIC HAND-LOOM.

This interesting invention is, so far as we know, unique, in that it represents the steam-power loom without the steam, and, being automatic, represents the born skilled weaver when operated by the novice of a few days' experience. It is claimed that Flower's Automatic Loom can be driven through the usual working day by a girl of 14 or 15 years, and that the wider looms of 60 to 100 inches reed space scarcely require more effort than those for narrower width weavings. The machine, having been properly "set up," is simply kept in motion by a rocking cast of the

slay, yielding from forty to eighty picks per minute, the operator's intelligence being chiefly occupied watching for broken threads and other minor accidents common to all forms of looms. In the Flower Looms there is no expensive outlay on boilers, furnaces, or engineers, nor are there the serious risks under the Employers' Liability Acts. They are constructed to make tweeds, frieze, flannels, and other textile fabrics. They have been very successfully introduced into several lunatic asylums in England and Ireland, as agreeable and diverting occupation for the afflicted inmates, affording at the same time substantial relief to the ratepayers, excellent pure wool clothes being produced at remarkably small cost for the wear of the patients and for uniform clothing of the attendants. The Flower Looms are said to be slowly making way within the weaving trade, and are likely to be largely used for native industries, wherever a group of four or five or more looms can be instituted, each five or six being served by a beaming or warping machine, necessary to insure even weaving and even wear. The makers are Messrs. Robert Hall and Sons, of Bury, and the latest pattern loom may be seen at work in the Technical Instruction Department of the Exhibition.

The Flower Loom exhibited at Cork has been purchased for the Cork District Asylum, and a second is ordered from the makers.—From the *Irish Times*, September 22nd, 1902.

OBITUARY.

JOSEPH RAYMOND GASQUET.

We regret to record the death of Dr. Joseph Raymond Gasquet, which took place at his residence in Brighton on the 13th of August.

He was 64 years of age, and had suffered for very many years from a trying and painful affection, which he bore with most exemplary patience and fortitude throughout. Although his death was not unexpected, yet his loss is not the less keenly felt by his friends and acquaintances, for no one who came in contact with him could fail to appreciate his uniform kindness and sympathy.

Dr. Gasquet prosecuted his medical studies at the University College Hospital in London, and graduated with distinction at the London University in 1859. After a few years spent in general practice in London he accepted the post of Medical Officer to St. George's Retreat at Burgess Hill, on the opening of that asylum; this necessitated his leaving London, and he settled in Brighton in 1867. He took an active part and keen interest in the management of St. George's Retreat during its growth and development, and only when increasing infirmity compelled him did he retire from active work, about three years ago.

Always taking the keenest interest in the advances of medical science, his intimate knowledge of French, German, and Italian enabled him to follow its progress abroad. With the idea of keeping the younger members of the profession in touch with the advances in medicine, and as a sort of post-graduate work, he started a small society among some of the practitioners in Brighton, for the reading and discussion of papers; this society continues to flourish.

He contributed various papers to the medical journals, and for many years supplied the Italian retrospects for this JOURNAL, but almost all his leisure hours he devoted to philosophical studies, and he looked on this as his relaxation and pleasure. His perfect knowledge of the classics enabled him to become most familiar with the older and more modern schools of thought. He had, however, to a marked extent the diffidence and retiring disposition of a deep student, and so it is to be profoundly regretted that he left but few records of his study and impressions.

JULES FALRET.

Jules Falret died on the 28th of June, 1902. He was a son of Jean Pierre Falret, one of the most distinguished pupils of Esquirol, and was born in the month of April, 1824, in the private asylum of Vanves, founded by his father and Félix

Voisin, of which asylum he became a superintendent, and where he lived and died. Interne des Hôpitaux de Paris in 1847, he was chosen in 1867 as a physician of the old Hospice de Bicêtre, where he remained until 1884, when he succeeded to Moreau de Tours at the Salpêtrière. Elected as a member of the Société Médico-Psychologique de Paris in 1854, he was president of that association for 1889. In the same year he presided over the meetings of the International Congress of Psychiatry. He became an honorary member of our Association in 1865.

Jules Falret was one of the most distinguished alienists of our time. Some, perhaps, acquired a higher reputation who did not possess his worth; for he was a very modest man and a thorough gentleman, averse to every form of puff and quackery. He liked to receive his friends and pupils in his hospitable home, and all regarded him with affection. His leisure time was devoted to the Patronage des Aliénés, an after-care association created by his father fifty-seven years ago.

Some of Jules Falret's principal books and notices are as follows:

Recherches sur la folie paralytique et les diverses paralysies générales (thèse inaugurale, Paris, 30 mai, 1853).

"Des diverses paralysies générales" (*Archives générales de médecine*, février, 1855).

"De la catalepsie" (*Archives générales de médecine*, 1857).

La paralysie générale est une forme spéciale de maladie mentale (discours prononcé à la Société Médico-Psychologique, le 25 juillet, 1858; *Annales*, 1859, t. iii, p. 125).

"Du diagnostic différentiel des paralysies générales" (*Archives générales de médecine*, 1858).

Principes à suivre dans la classification des maladies mentales (discours prononcé à la Société Médico-Psychologique, le 26 novembre, 1860; *Annales M.-P.*, 1861, t. vii, p. 145).

"État mental des épileptiques" (*Archives générales de médecine*, 1860 et 1861).

"Séméiologie des affections cérébrales" (*Archives générales de médecine*, octobre, 1860).

"Théories physiologiques de l'épilepsie" (*Archives générales de médecine*, février et mai, 1862).

"Les asiles d'aliénés de la Hollande" (Société Médico-Psychologique, séance 16 décembre, 1861; *Annales*, 1862, p. 312).

"La colonie d'aliénés de Gheel" (Société Médico-Psychologique, séance du 30 décembre, 1861; *Annales*, 1862, p. 138).

"De la responsabilité morale et de la responsabilité légale des aliénés" (Société M.-P., séance du 30 mars, 1863; *Annales*, 1863, p. 238).

"Des divers modes d'assistance applicables aux aliénés" (Société M.-P., séance du 12 décembre, 1864; *Annales*, 1865, p. 248).

"Troubles du langage et de la mémoire des mots dans les affections cérébrales" (*Archives générales de médecine*, numéros de mars, 1864, et suivants).

"L'amnésie" (*Dictionnaire encyclopédique des sciences médicales*, 1866, 1re série, t. iii, p. 275).

"L'aphasie" (idem, t. v, p. 605).

"La fonction du langage articulé" (*Archives générales de médecine*, août, 1866).

"La consanguinité" (*Archives générales de médecine*, février, 1865, et suivants).

"Folie raisonnante, ou folie morale" (Société M.-P., séances du 8 janvier et du 29 octobre, 1866; *Annales*, 1866, p. 382, et 1867, p. 68).

"Des asiles spéciaux pour les aliénés dits criminels" (Société M.-P., séance du 16 novembre, 1868; *Annales*, 1869, p. 136).

"Des aliénés dangereux" (Société M.-P., séance du 27 juillet, 1868; *Annales*, 1869, p. 86).

"Les législations étrangères sur les aliénés, et les réformes proposées à la loi de 1838" (*Archives générales de médecine*, octobre, 1869).

"Affaire Jeanson, accusation d'incendie et de meurtre" (Société de médecine légale, 1869).

"Cas d'aphasie, avec hémiplégie droite, pour lequel on demande l'interdiction"

(Société de médecine légale, séance du 23 novembre, 1868, et *Annales d'hygiène*, 1869, p. 430).

"Emploi de bromure de potassium à haute dose chez les épileptiques de l'hospice de Bicêtre" (Société M.-P., séance du 28 juin, 1870; *Annales*, 1871, p. 161).

"La responsabilité légale des aliénés" (*Dictionnaire encyclopédique des sciences médicales*, 1876, 3e série, t. iii).

"La folie à deux, ou folie communiquée (en collaboration avec Lasèque;)" *Archives générales de médecine*, septembre, 1877).

"La folie circulaire, ou folie à formes alternantes" (*Archives générales de médecine*, décembre, 1878, et janvier, 1879).

"Variétés cliniques de la paralysie générale" (*Congrès international*, 1878, p. 412).

Discours d'ouverture au Congrès international de médecine mentale, 1889, p. 24.

"Des obsessions avec conscience" (*Congrès international de médecine mentale*, 1889, p. 32).

Études cliniques sur les maladies mentales et nerveuses (Paris, 1890).

Les aliénés et les asiles d'aliénés (Paris, 1890).

HENRI DAGONET.

Henri Dagonet, who died in Paris on the 4th of September, 1902, was born in Châlons-sur-Marne on the 4th of February, 1823. Having graduated as M.D. in 1849, he became in the following year superintendent of the asylum of Stéphansfeld. In 1854 the Faculté de Strasbourg chose him as one of its *professeurs-agrégés*. He came to Paris in 1867, and entered the asylum of Sainte-Anne as superintendent.

Henri Dagonet was president of the Société Médico-Psychologique in 1885, when the statue of Philippe Pinel was solemnly erected in front of the Salpêtrière, and he enjoyed the honour of having been chosen to hand over to the city of Paris that monument consecrated to the memory of the illustrious philanthropist. He had been a pupil of Renaudin, and was acquainted, during his long, laborious, and successful life, with such men as Ferrus, Morel, Lasèque, Mittermaier. He was the son and he was the father of a distinguished alienist (Dr. Jules Dagonet is one of the superintendents in Sainte-Anne).

Inside and outside his speciality he was a man held in universal esteem. For some years his health was failing, and he was not able to attend the meetings of the Société Médico-Psychologique. His obsequies were celebrated on the 8th of September in the town of Verdun.

Some of Henri Dagonet's principal books and notices are as follows:

"Remarques médico-légales sur un cas de folie simulée" (*Annales M.-P.* 1848, t. xii, p. 87).

"Monomanie; extension graduelle du délire; démence consécutive" (*Annales M. P.*, 1849, t. i, p. 468).

Considérations médico-légales sur l'aliénation mentale (thèse inaugurale, Paris, 1849).

"L'hydrothérapie appliquée en traitement des aliénés stupides" (*Annales M.-P.*, 1850, t. ii, p. 343).

"Pathogénie de la folie" (*Gazette médicale de Strasbourg*, 1850).

"Quelques données scientifiques nouvelles en aliénation" (*Gaz. de Strasbourg*, 1850).

"Lettre de Vienne" (*Gaz. méd. de Strasbourg*, 1851).

"Rapports médicaux sur l'asile de Stéphansfeld" (*Gaz. méd. de Strasbourg*, 1851 à 1860).

"Influence de la situation morale dans la chloroformisation" (*Gaz. de Strasbourg*, 1852).

"Le choléra à l'asile de Stéphansfeld" (*Gaz. de Strasbourg*, 1854).

"La section de psychiatrie au Congrès de Göttingen" (*Gaz. de Strasbourg*, 1854).

"Statistique sur l'aliénation mentale dans le département du Bas-Rhin" (*Gaz. de Strasbourg*, 1855).

- "Lypémanie démonomaniaque avec impulsions homicides" (*Annales M.-P.*, 1858, t. iv, p. 185).
- "Folie ambitieuse consécutive à une blessure de la tête" (*Annales M.-P.*, 1858, t. iv, p. 583).
- "Notice statistique sur l'aliénation dans le Bas-Rhin" (*Gaz. de Strasbourg*, 1859).
- "Lypémanie religieuse et ambitieuse" (*Archives de Baillarger*, 1861).
- "De la paralysie générale" (*Gaz. de Strasbourg*, 1862).
- "Rapport médico-légal sur le nommé Lintz, inculpé d'assassinat" (*Annales M.-P.*, 1863, t. ii, p. 35).
- "Les établissements d'aliénés" (*Annales M.-P.*, 1863, t. i, p. 500).
- "Rapport médico-légal sur le nommé Frainier, inculpé d'assassinat" (*Annales M.-P.*, 1864, t. iii, p. 36).
- "Note sur une amélioration dans le service des aliénés gâteux de l'asile de Stéphanfeld" (*Annales M.-P.*, 1864, t. iv, p. 92).
- "Loi de 1838" (*Annales M.-P.*, 1865, t. v, p. 246).
- "Des expertises médico-légales en aliénation mentale (Mittermaier) : analyse par H. Dagonet" (*Annales M.-P.*, 1865, t. vi, p. 201 ; 1866, t. vii, p. 198 ; 1867, t. ix, p. 225 ; 1868, t. xi, p. 235).
- "Asiles d'aliénés" (Congrès de Rouen, 1865 ; *Annales M.-P.*, 1865, t. vi, p. 379).
- "Rapport médico-légal sur le nommé Seiler, accusé d'incendie volontaire" (*Annales M.-P.*, 1866, t. vii, p. 362).
- "Rapport sur l'état mental du nommé Pitter, inculpé d'assassinat et de tentative de meurtre" (*Annales M.-P.*, 1867, t. ix, p. 423).
- "Les aliénés dangereux" (*Société M.-P.*, 28 décembre, 1868 ; *Annales M.-P.*, 1869, t. i, p. 316).
- "Un aliéné provoquant son isolement dans un asile" (*Journal de médecine mentale de Delasienne*, 1869, t. ix, p. 356).
- "Des impulsions dans la folie et de la folie impulsive" (*Annales M.-P.*, 1870, t. iv, pp. 5 et 215).
- "Observation de manie ambitieuse" (*Annales M.-P.*, 1871, t. vi, p. 161).
- De la stupeur dans les maladies mentales* (Paris, 1872).
- De l'alcoolisme* (Paris, 1873).
- "Asiles d'aliénés, par le Dr. Cyon (observations et analyse)" (*Annales M.-P.*, 1874, t. xi, p. 60).
- "Folie morale et folie intellectuelle" (*Annales M.-P.*, 1877, t. xvii, p. 21).
- "Réorganisation du service des aliénés du département de la Seine" (*Annales M.-P.*, 1878, t. xx, p. 29).
- "Conscience et aliénation mentale" (*Annales M.-P.*, 1881, t. v et vi, p. 19).
- "Réformes à introduire dans la loi de 1838" (*Annales M.-P.*, 1882, t. viii, No. de septembre).
- "Une visite à l'asile d'aliénés de Dobran, en Bohême" (*Annales M.-P.*, 1885, t. i, p. 242).
- "Aliénation mentale méconnue" (*Annales M.-P.*, 1889, t. ix, p. 406).
- "Du rêve et du délire alcoolique" (*Annales M.-P.*, 1889, t. x, pp. 193 et 337).
- "Etude clinique sur le délire de persecution" (*Annales M.-P.*, 1890, t. xii, pp. 190 et 337).
- "L'aliénation mentale chez les dégénérés psychiques" (*Annales M.-P.*, 1891, t. xiv, pp. 5, 203, et 353).
- "Observations sur les délires associés et les transformations du délire" (*Annales M.-P.*, 1895, t. i, p. 5).
- "Les sentiments et les passions dans leurs rapports avec l'aliénation mentale" (*Annales M.-P.*, 1895, t. ii, p. 5).
- Traité des maladies mentales* (1re édition, 1862 ; 2e, 1876 ; 3e, 1894).

NOTICES BY THE REGISTRAR.

EXAMINATION FOR THE NURSING CERTIFICATE.

The following is a list of successful candidates at the November Examination, 1902 :

- Bucks County Asylum.*—Male : Arthur Jerome Gibbons.
Derby County Asylum.—Females : Eliza Allatt, Mary Ann Bradley, Olivia Maude Johnson.
Essex County Asylum.—Females : Louisa Mary Barker, Emily Jane Briggs, Edith Choate, Millie King, Rosa Mary Pink, Emily Sharpington.
Kent County Asylum, Barming Heath.—Males : James Brooker, Richard Gardiner, James Kerr, Stephen Tyhurst. Females : Emily Alice Birch, Laura Simmons, Florence Emily Wilson.
Kent County Asylum, Chartham.—Female : Clara Allen.
London County Asylum, Bexley.—Males : Albert Munro Bentley, Harry Fee, George Hamilton Smith, Charles Windmill.
Norfolk County Asylum.—Females : Nellie Bird, Elizabeth Annie Hancock, Alice Logan.
Staffordshire County Asylum, Cheddleton.—Females : Frances Elizabeth Beckitt, Gladys Stovin Bettinson, Julia Muriel F. Fraser, Margaret Somerville Hope.
Somerset and Bath Counties Asylum.—Males : Alfred Maunder Blake, Henry Robert Tucker. Females : Bessie Lily Cook, Louisa Beatrice Lee, Margaret M. Warren.
Warwick County Asylum.—Females : Gertrude Crump, Elizabeth Jane Lewis, Mary Richards.
City of Birmingham Asylum, Winson Green.—Males : Frank Northwood, William Walton.
City of Birmingham Asylum, Rubery Hill.—Males : Henry Hooton, William Shelley. Females : Kate Fanny Gould, Beatrice Emily Harris, Rose Eleanor Morley.
Gloucester County Asylum.—Female : Annie Garry.
Derby Borough Asylum.—Male : John Maclean. Female : Eliza Bostock.
City of London Asylum, Dartford.—Females : Fanny Field, Eleanor Jones.
Camberwell House Asylum.—Females : Margaret May Griffiths, Elizabeth L. Strang.
Darenth Asylum.—Females : Edith Clare Baines, Rosina Gowers, Jane Jones, Jane Parry.
Holloway Sanatorium.—Females : Ada Mary Taylor, Grace Vulliamy, Annette A. B. Wrenford.
Northumberland House Asylum.—Male : Thomas John Dorling.
Redlands Asylum.—Male : William Whitfield. Female : Florence M. Roberts.
The Retreat, York.—Males : Martin Burke, Thomas Fulton. Female : Lilian Jackson.
Gartloch Asylum.—Male : George D. Plenderleith. Females : Agnes Baird, Helen Munsie Hastings.
Inverness District Asylum.—Females : Annie Matthew Barron, Mary Helen Furlong, Mary Arthur Lucas.
Mavisbank Polton Asylum.—Females : Margaret D. G. Blair, Barbara Grieg Fowler, Annie Jane Macdonald.
James Murray's Royal Asylum, Perth.—Females : Grace Welsh Guthrie, Cecily Molumby.
Perth District Asylum.—Female : Isabella Cameron.
Riccartsbar Asylum.—Male : Charles Small Still. Female : Jessie Barbara Duff.
Stirling District Asylum.—Females : Jeannie Binnie, Barbara Dewar, Helen Herds, Isabella T. Maltman.
Mullingar District Asylum.—Males : Matthew Brogan, William Gavin, Abraham Gordon, James Grimes, George Newton. Females : Kate Coffey, Mary Dunne,

Janie Lyster, Bridget Malone, Annie Naughton, Annie Neeve, Frances Jane Somerset.

Leavesden Asylum.—Female: Frances C. Crouchley.

The following is a list of the questions which appeared on the paper:

1. What are the principal parts of the brain? How are they connected with each other and with the spinal cord? Of what is the brain composed?
2. Describe an ordinary epileptic fit? What points should be specially observed for report to the Medical Officer? What treatment would you adopt before medical aid arrives?
3. What precautions should be adopted to prevent the spread of diarrhoea in an asylum?
4. What are hallucinations? Give examples of their occurrence. In what ways may a patient's conduct be influenced by them?
5. What bones form the thorax? What separates the thorax from the abdomen? What large organs does the thorax contain, and what are their relative positions?
6. What changes take place in the blood as it passes through the tissues of the body generally? What changes take place in it as it passes through the lungs?
7. Describe a case of melancholia or mental depression.
8. How would you act in a case of (a) a patient's clothing catching fire; (b) a simple fracture of the bones of the leg; (c) attempted suicide by hanging.
9. What do you understand by the word antiseptics? Mention those chiefly used, and state what precaution should be taken to prevent accident in connection with the storing of these substances?
10. What precautions should be observed in the nursing of patients suffering from consumption?

NEXT EXAMINATION FOR NURSING CERTIFICATE.

The next examination will be held on Monday, May 4th, 1903, and candidates are earnestly requested to send in their schedules, duly filled up, to the Registrar of the Association not later than Monday, April 6th, 1903, as that will be the last day upon which, in accordance with the rules, applications for examination can be received.

Note.—As the names of some of the persons to whom the Nursing Certificate has been granted have been removed from the register, employers are requested to refer to the Registrar in order to ascertain if a particular name is still on the roll of the Association. In all inquiries the number of the certificate should be given.

For further particulars respecting the various examinations of the Association apply to the Registrar, Dr. Alfred Miller, Warwick County Asylum, Hatton, Warwick.

NOTICES OF MEETINGS.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

General Meeting.—The next General Meeting will, through the courtesy of Dr. Legge, be held at the Derby County Asylum on Thursday, February 12th, 1903.

Several Committees will meet on the 11th, and on the morning of February 12th, in Derby.

The following papers have been promised:

"The Stereoplasm of the Nerve Elements: A Study in Nerve Dynamics," by Dr. Andriezen.

"Lunacy and Law," by Drs. Ernest W. White and T. Outterson Wood.

South-Eastern Division.—The Spring Meeting will be held, by the courtesy of Dr. Harding, at Berrywood Asylum, Northampton, in April, 1903.

South-Western Division.—The Spring Meeting will be held, by the courtesy of Dr. Benham, at the City Asylum, Bristol, in April, 1903.

Northern and Midland Division.—The Spring Meeting will be held, by the courtesy of Dr. Menzies, at Cheddleton Asylum, Leek, on Thursday, April 30th, 1903.

Irish Division.—The next meeting will be held in Dublin on Wednesday, January 28th, 1903.

APPOINTMENTS.

- ✓ Allen, Sydney Chalmers, M.B., B.Sc., appointed Assistant Medical Officer to the Lunatic Asylum at Seacliff, New Zealand.
- ✗ Fennell, Charles H., M.A., M.D.Oxon., M.R.C.P.Lond., appointed Assistant Medical Officer at Darenth Asylum.
- ✓ Marr, Gordon William S., M.B.Syd., appointed Assistant Medical Superintendent to the Hospital for the Insane, Goodna, Queensland.
- ✓ McKelvey, Alexander N., L.R.C.P.&S.I., appointed Assistant Medical Officer to the Lunatic Asylum, Auckland, New Zealand.
- ✗ McLean, John Barr, M.B., B.S.Melb., appointed Assistant Medical Superintendent to Hospital for the Insane, Toowoomba, Queensland.
- ✓ O'Brien, John A., M.B., appointed Acting Medical Superintendent to Kew Hospitals for the Insane, Victoria.
- ✗ Reid, William, M.A., M.B., Ch.B., appointed Junior Assistant Medical Officer to the Burntwood Asylum, Lichfield.
- ✓ Row, Linford E., M.D.Brux., L.R.C.P.&S.Edin., appointed Medical Superintendent to the Hospital for the Insane, Goodna, Queensland.
- ✓ Taylor, Frederic R. P., M.D., B.S.Lond., appointed Medical Superintendent of the New East Sussex Asylum at Hellingly.
- ✓ Whittington, R., B.A., M.B., B.Ch.Oxon., appointed Medical Officer to the Warneford Asylum, Oxford.

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Part I.—Original Articles.

*Bacteriological and Clinical Observations on the Blood of
Cases suffering from Acute Continuous Mania.* By
LEWIS C. BRUCE, M.D., Murthly, Perthshire.

TWO years ago, when the toxic theory of the causation of insanity was attracting attention in this country, I made a series of observations on the blood of acute recent cases of insanity with the object of ascertaining whether organisms were ever present. In no case, with the exception of one of general paralysis, did I ever find an organism in the blood. It occurred to me, however, that if I could make an aseptic necrotic area subcutaneously, the serum and pus in such an area would be a suitable nidus for the growth of organisms circulating in the blood, and that by aspirating the serum and pus and placing it in suitable nutrient media one should be able to grow such organisms, if present. Acting upon this theory, I took a case of acute mania—an adult woman—and, with antiseptic precautions, injected into the soft tissues of the flank 2 c.c. of turpentine.⁽¹⁾ An abscess formed, and on the third day after the injection I aspirated some fluid, consisting

of blood-serum and pus. A couple of drops of this fluid were then added to each of four tubes containing 8 c.c. of sterile nutrient broth. These tubes were incubated for forty-eight hours, when they showed slight turbidity, and upon microscopical examination the broth was found to contain a pure growth of a small diplo-bacillus.

Since then I have made twenty-four similar observations, and have isolated this diplo-bacillus in seven cases. Table I shows the varieties of mental disease in which the observations were made. It will be noticed that this small diplo-bacillus has been obtained almost exclusively in cases of acute continuous mania in adults.

Dr. Houston kindly examined the organism, and gives the following description:—"A small, short bacillus occurring singly, in couples and short chains; stains very feebly by Gram's method. A stroke culture on agar shows a white growth with no special characters; later acquires a yellow tint; on gelatine the growth tends to remain somewhat circumscribed, with sinuous edges. Later, it becomes pitted and wrinkled and skin-like in character; eventually assumes a pale yellow colour, and later slow liquefaction sets in. In broth it forms a uniform turbidity, but the growth is not very abundant. In litmus milk at 37° C. it gives a slow alkaline reaction. It is not fatal to guinea-pigs in doses of 5 c.c. broth culture inoculated subcutaneously."

My own observations on the organism are as follows:

The method of obtaining the diplo-bacillus is as follows:—A small quantity of the serum and pus from the necrotic area is extracted with a hypodermic needle and syringe, and a few drops are added to each of four tubes containing 8 c.c. sterile broth. The tubes are incubated for forty-eight hours at 37° C., at the end of which period they show a slight turbidity if the bacillus is present. I have seen the bacillus take seventy-two hours to show in the broth. If a hanging-drop culture of the broth be now examined, it will be noticed that the bacillus tends to grow in chains and also in clusters, and that it is slightly motile. If stroke cultures be now made from the broth upon agar, the bacillus grows in from thirty to forty hours in the form of little gelatinous colonies, which later become opalescent. If a sub-culture be made again on agar from these colonies, the growth appears as a thin whitish line

in about twelve hours. The bacillus holds Gram's feebly, and does not take up any of the commoner dyes well. A stab culture in gelatine grown at 20° C. liquefied the gelatine in sixty days.

I am indebted to Mr. Richard Muir, of Edinburgh University, for much valuable assistance and instruction in this part of my work.

The organism is not fatal to rabbits, guinea-pigs, or white mice. Two kittens were fed every second day for four months upon 4 c.c. of broth cultures. Their growth was slow, and they were thin and poorly nourished. When the cultures were no longer added to their food they improved in appearance, and are now apparently healthy and well developed.

Agglutination tests were made with the blood of five patients suffering from acute mania. The results were unsatisfactory, but partial agglutination seemed to occur in every case. The blood-serums of five members of the nursing staff were used in controls, and in only one of these was there any clumping of the bacillus, even at the end of twelve hours. The dilution used in all the agglutination tests was 1 in 10.

I have examined bacteriologically the skins of ten cases of acute insanity, and have never isolated the diplo-bacillus. I have also made plate cultures from the fæces of six cases of acute insanity. In one I isolated an organism presenting all the characters of the diplo-bacillus, and in two of the other five cases I saw an organism corresponding to the diplo-bacillus in size and staining reaction, but failed to isolate the growth.

I have been tempted to place these results before you in the hope that the same organism may be detected by other workers. If it is obtained by others exclusively from cases of acute mania, there may be grounds for believing that there is some connection between the organism and the disease.

What was the effect of the abscesses upon the patients? 1. In twenty-three out of the twenty-four cases the abscess induced a febrile attack within twenty-four hours after the injection of the turpentine. In several cases the temperature rose as high as 102° F. 2. In no case was the patient the worse physically for the abscess, and in many cases there was marked benefit.

To refer again to Table I, it will be seen that the patients who benefited most were those suffering from acute mania.

The only patient among the ten suffering from acute mania who did not recover or improve had been ill for over six months before the abscess was made. The average duration of the illness in those who recovered was three and a half months. Some of the results in cases of acute mania were so satisfactory from a recovery point of view that I never hesitate to induce an abscess in every case of acute mania which does not rapidly improve under ordinary treatment. Out of the whole twenty-four abscesses I only had to open one which became septic accidentally. A few of the abscesses ruptured, but the majority became absorbed, and I am of the opinion that the abscess should not be evacuated, as even after all acute symptoms have subsided it apparently acts as a stimulant to leucocyte production, which is Nature's method of assisting recovery in these cases. I do not wish you to think that I ignore the effect of the febrile attack and the subsequent stimulus to nutrition which follows febrile attacks, but I am satisfied that it is through the leucocyte action of the blood that Nature effects recovery in all cases of acute mania. I have examined in the last two years the blood, and especially the leucocytes, in fifty cases of acute insanity. The observations in each case were not single ones, but made continuously for weeks and months. To assist in this work I have trained several members of the nursing staff, who have been of great service in preparing slides and cover-glasses, making and staining films, and even, in some cases, of counting leucocytes by means of Thoma Zeiss's hæmocytometer.

To-day I propose to describe the changes which occurred in the leucocytes in fourteen acute continuous cases of mania occurring in adults. I start on the hypothesis that anything between 6000 and 10,000 leucocytes per cubic mm. of blood is normal, and that the usual percentage of the polymorphonuclear leucocytes is about 70 *per cent.* The numerical counts were made with Thoma Zeiss's hæmocytometer, and thirty or forty fields were counted upon each enumeration, and the results were frequently checked by duplicate counts and control counts on healthy blood. The films were stained with eosine and methylene blue—eosine and hæmatoxylin—Leishman's stain and Jenner's stain. At each differential count never less than 200 leucocytes were counted. I have divided my observations as follows :

1. The leucocytosis which occurs in a patient who recovers without interference. (Chart I.)

2. The leucocyte changes which occur in a patient who does not recover, but becomes chronic. (Chart II.)

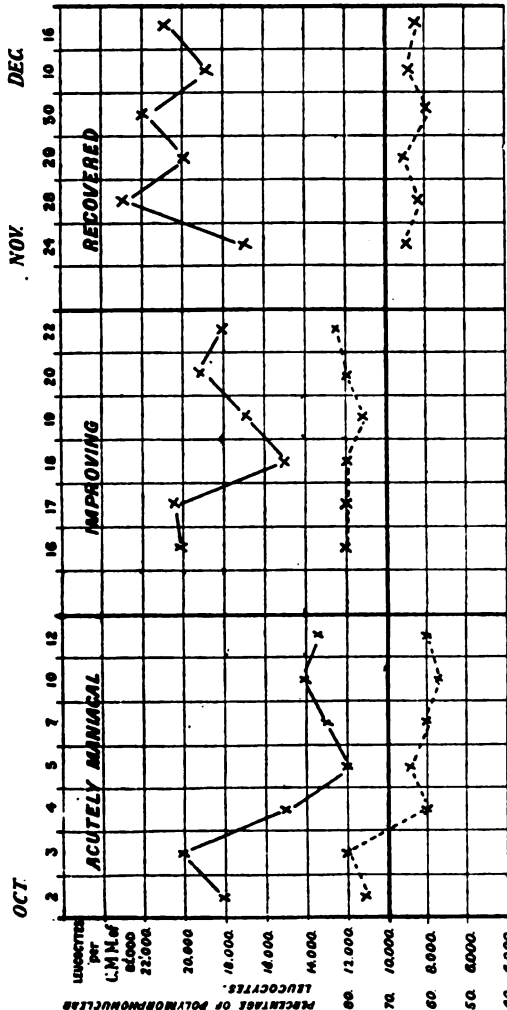


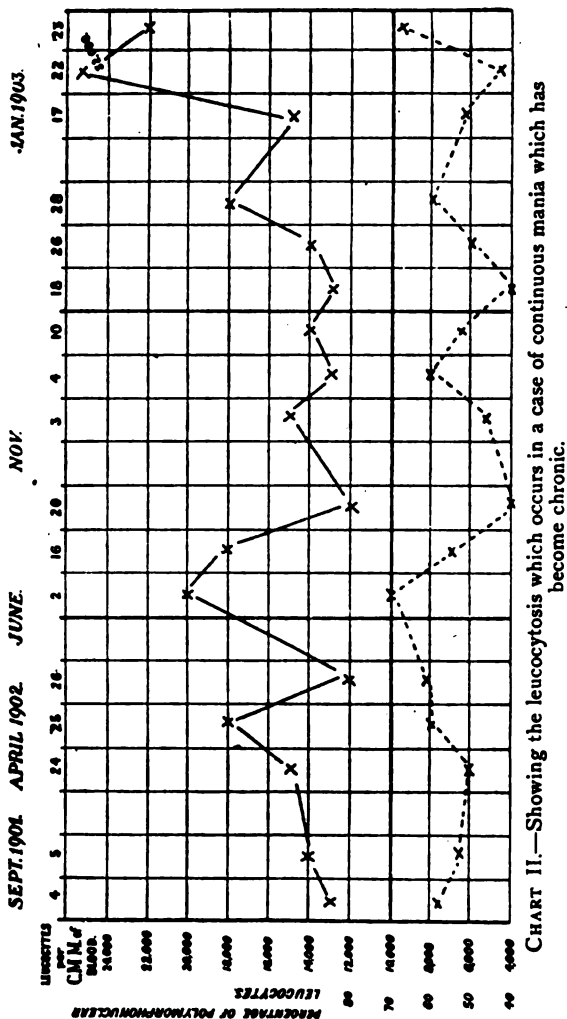
CHART I.—Showing the leucocyte changes in a case of acute continuous mania which recovered. The leucocytes per c.m.m. of blood are indicated by the continuous line; the percentage of polymorphonuclear cells by the dotted line.

3. The leucocyte changes which occur when an abscess is made in a recent case, and is followed by recovery. (Chart III.)

4. The leucocyte changes which occur when an abscess is made in a chronic case which does not recover. (Chart IV.)

1. The leucocyte changes which occur in a patient who recovers.

If you are fortunate enough to observe the leucocytes in a



recent case of mania from the very commencement, you find during the first few days of the disease that the leucocytosis is high, say 18,000 to 20,000 per c.mm. of blood, and that the percentage of polymorphonuclear cells is 70 or above 70 *per*

cent., and never lower than 60 *per cent.* Nature apparently makes a vigorous effort at the commencement of the disease to counteract the toxæmia by pouring leucocytes into the system. The higher the leucocytosis, within certain limits, and the higher the percentage of polymorphonuclear cells, the better is the prognosis. If the patient does not recover at once the leucocytosis falls slightly to anything between 12,000 and 16,000 leucocytes per c.mm. of blood, and the polymorphonuclear cells rarely reach 70 *per cent.* This state of affairs may last for weeks, and gradually leads into the stage of recovery. When the patient shows signs of recovering a curious change sets in in the leucocytosis. Instead of the leucocytosis diminishing, it increases, and the percentage of polymorphonuclear cells rises. In a favourable and rapidly recovering case these cells may be as high as 80 *per cent.* A still more curious thing occurs when recovery is actually complete—the leucocytosis persists, but the percentage of polymorphonuclear cells again falls to between 60 and 70 *per cent.* It is impossible to say how long this leucocytosis persists, because one cannot keep a recovered patient indefinitely under observation. All I can record is that all the recovered cases of mania discharged since these observations were begun have been discharged with a high leucocytosis. Is this leucocytosis a protective leucocytosis?

2. The leucocyte changes which occur in a patient who does not recover.

The changes which occur are slow, and go on for months with many fluctuations, but shortly they are as follows:—The leucocytosis tends to remain between 12,000 and 16,000 per c.mm., with occasional rises and falls, but the percentage of polymorphonuclear cells tends to fall until finally, after the disease has lasted for one or two years, the proportion of polymorphonuclear cells may be anything from 20 to 50 *per cent.* There is always a proportionate increase of lymphocytes. With an exacerbation of the disease there may be increased leucocytosis, with a rise in the percentage of the polymorphonuclear cells, but such an increase is very temporary.

3. The leucocyte changes which occur when an abscess is made in a recent case and is followed by recovery.

Within six hours after the subcutaneous injection of the turpentine the polymorphonuclear cells may show a marked

relative increase. In twenty-four hours the leucocytosis is distinctly increased, and the percentage of polymorphonuclear cells remains high, *i. e.* they are both actually and relatively increased. In forty-eight hours the leucocytosis is still higher, rising in various cases to 30,000, 40,000, or even 60,000

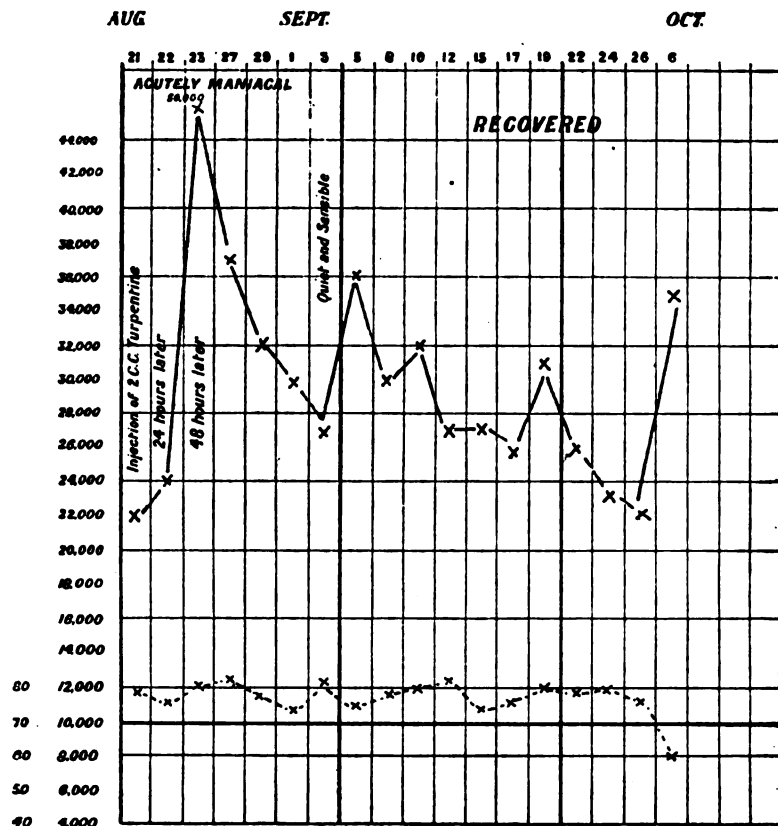


CHART III.—Showing the leucocyte changes in a recent acute case of continuous mania in which a turpentine abscess was induced, and which recovered rapidly.

per c.mm. of blood, while the percentage of polymorphonuclear cells remains above 80 *per cent.*, and this is generally the maximum of the leucocytosis.

Mental improvement appears to be in proportion to the leucocytosis, *i. e.* the higher the polymorphonuclear element the more marked is the mental improvement. For a varying

period after the forty-eight hours the leucocytosis remains high. For instance, in one case in which an abscess was induced on August 21st the leucocytosis by the end of September had never fallen below 22,000 per c.mm. This patient made a rapid and excellent recovery. As recovery advances, however, the percentage of polymorphonuclear cells generally falls until it reaches somewhere about 60 *per cent.*, and the lymphocytes are slightly increased.

4. The leucocyte changes which occur when an abscess is made in a chronic case.

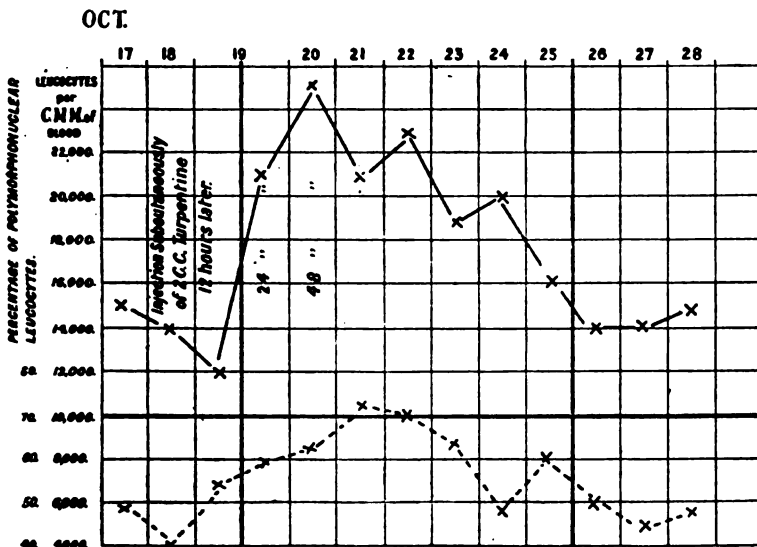


CHART IV.—Showing the leucocyte changes occurring in a case of chronic continuous mania after the subcutaneous injection of turpentine.

Twelve hours after the subcutaneous injection of the turpentine there may be a fall in the leucocytosis with a slight relative increase of the polymorphonuclear elements. Twenty-four hours after the injection there is a decided rise in the leucocytosis, but the polymorphonuclear cells show a very slight relative increase. In forty-eight hours the leucocytosis is markedly increased, but the increase of polymorphonuclear cells may not reach 70 *per cent.* By the end of seventy-four hours in the case shown in the chart, the leucocytosis was showing a tendency to fall, but the polymorphonuclear cells

were relatively increased, and by the end of 122 hours the leucocytosis was distinctly falling and the polymorphonuclear cells were again below 70 *per cent*. Thereafter there was a steady fall of both the leucocytosis and the percentage of the polymorphonuclear elements. This patient showed no mental improvement. By comparing Charts I and III it will be seen how the formation of an abscess simulates and surpasses the leucocyte production which naturally occurs when a patient recovers, and a comparison of Charts III and IV illustrates graphically the differences in the resistive powers of a recent acute curable case of mania and a chronic case, whose energies have been sapped by long-continued disease.

These observations do not apply to the condition of mania in patients suffering from "folie circulaire," nor to mania the result of alcoholic poisoning.

1. If these blood observations are correct, they practically prove that acute continuous mania is an acute infective condition, and that when recovery takes place a condition of immunity is established.

2. They prove that, although the patient apparently recovers, the disease remains latent; hence the persistent leucocytosis, a point which might be of great importance in life-insurance examinations.

3. An examination of the blood is a valuable aid to prognosis.

Let us say a case of mania has lasted for a month, and remains maniacal and sleepless. The blood examination gives a leucocytosis of 14,000 per c.mm. of blood, with a percentage of 60 or below 60 of the multinucleated cells. The chances of an immediate or early recovery are poor. On the other hand, if the blood examination gives a leucocytosis of 18,000 or 20,000, with the multinucleated cells in a percentage of 70 or above 70, the prognosis is good. It is as well, when examining the condition of the blood to aid prognosis, to examine the blood on at least two consecutive days.

TABLE.

Cases.	Sex.	Age.	Mental disease.	Organisms.	Remarks.
1	F.	64	Adolescent mania	Diplo-bacillus	Arrested the attack.
2	F.	64	" "	"	Very temporary benefit.
3	F.	36	" "	Diplo-bacillus and cocci	Recovery.
4	M.	53	" "	Diplo-bacillus	Recovery.
5	F.	62	" "	Sterile	Arrested the attack.
6	F.	46	" "	Diplo-bacillus and cocci	Recovery.
7	F.	47	" "	Diplo-bacillus and cocci	Recovered, then became depressed.
8	F.	53	" "	Sterile	No immediate benefit, but patient made good recovery.
9	F.	32	" "	"	Slightly less excited.
10	F.	62	" "	"	No immediate benefit, but made good recovery.
11	F.	28	Puerperal mania	"	Marked benefit; rapid recovery.
12	F.	28	Adolescent epileptic mania	"	Arrested the attack.
13	F.	27	Adolescent mania	"	No benefit.
14	F.	34	Chronic mania of adolescent	Cocci	Very slight benefit.
15	M.	24	Adolescent mania	Sterile	Recovery.
16	F.	18	" "	Diplo-bacillus	Temporary benefit.
17	M.	35	General paralysis	Sterile	No benefit.
18	F.	47	" "	"	"
19	F.	38	" "	"	"
20	F.	50	" "	Cocci	"
21	M.	37	" "	Sterile	Marked improvement.
22	F.	35	Excited melancholia	"	Temporary benefit.
23	F.	54	" "	"	No improvement.
24	M.	54	" "	"	"

(¹) Dr. Ford Robertson points out to me that G. Albertotti (*Annali di Freniatrice*, 1896, pp. 23 and 147) has already utilised turpentine abscesses as a method of treatment. I utilised the turpentine in the first place to induce an aseptic abscess for bacteriological observation.

DISCUSSION

At the Meeting of the Scottish Division, December, 1902.

Dr. IRELAND.—I regret that Dr. Clouston has had occasion to go away on some business, and he has asked me to take the chair. I must say that by his absence we will miss some very pregnant observations, which he no doubt would have made. I remember in the first edition of his book on mental diseases he pointed out the probability of a cure for insanity from the consideration of cases which recovered after certain fevers which he had observed. Now here we have Dr. Bruce, who has experimented with a similar idea and reduced it to an exact form, and I think that some of our members should repeat these observations made by Dr. Bruce. I have got some hopes that they will be confirmed, and we

all ardently wish that that should turn out to be the case. The only suggestion I could make is that Dr. Bruce apparently has only employed turpentine to create the abscess.

Dr. BRUCE.—Yes.

Dr. IRELAND.—He might try some other substance. Turpentine has very peculiar properties, and it is possible that this might have a certain effect on the blood. I therefore think that if there was an abscess formed in some other way it would confirm the conclusions which Dr. Bruce has come to if the results were identical. I have no doubt that a number of gentlemen will have remarks to make on this very pregnant paper.

Dr. YELLOWLEES.—I have nothing to say except to express my emphatic admiration for the work done and my very hopeful views as to what may come out of it. If I were a young man like Dr. Bruce I would work at this with all my soul. I am sorry I have not time to offer any remarks, as I have to go to the same meeting as Dr. Clouston has gone to. I have pleasure in proposing a hearty vote of thanks to Dr. Bruce for his admirable paper.

Dr. EASTERBROOK.—I have much pleasure in seconding Dr. Yellowlees' vote of thanks to Dr. Bruce, and know that his inquiry has involved much time and work. I have not made any observations myself from the same point of view as Dr. Bruce. He lays great stress on the connection between the leucocytes in the blood and the mental condition of the patient, as if the one had almost a dominating relationship with the other. I am not prepared to exactly contradict that statement, but I must say that from certain observations I have made, I would be more inclined to ascribe the changes in the mental condition to changes in the cell metabolism of the brain and body generally. For example, when a patient recovers, one of the most striking things is a gain in weight, and improved colour and circulation. If one tries to get at the explanation of the loss in weight followed by the gain in weight, there is one explanation which seems pretty apparent, and that is going back to the condition of affairs in the cells of the body. According to the views of Hering and other physiologists, the more catabolism that takes place in the cell the greater is the resistance to that catabolic condition going on in the cell—there is a tendency for anabolism to assert itself. So in acute mania, where you have very advanced catabolism going on, that stage continues for a certain period, and then the tendency to anabolism asserts itself, and when the patient recovers it is increased. It seems as if one would have to go to the protoplasm of the brain neurons as explaining the condition and recovery in the patient. I would rather be inclined to say that it was the protoplasm of the cells of the brain and body generally that held the secret. With regard to the leucocytes, there may be some connection between the two, and whether they stimulate this anabolism or not I do not know.

Dr. MACDONALD.—Have you attempted any experiments in the way of injecting the turpentine into presumably healthy individuals?

Dr. BRUCE.—I have not found any individuals who would offer themselves for such an experiment.

Dr. MACDONALD.—You might find some. No matter what chemical you may introduce under the skin, it will certainly tend to the production of an abscess, granted that there are pus-producing organisms in the body. It is not correct to talk of that collection of matter which Dr. Bruce produces as an abscess. He must first show that it contains pus-producing organisms. This diplo-bacillus may be a pus-producing organism, but it may not be. It is most important to have these contrary experiments.

Dr. FORD ROBERTSON said he was of opinion that the observations that Dr. Bruce had brought before them were of much value. They illustrated the importance of uniting the study of the pathology of insanity with clinical investigation. It was from researches of this nature that important advances in the treatment and prophylaxis of insanity would chiefly come. It was easy to criticise work such as Dr. Bruce had been doing, and he supposed that in a discussion of this kind it was right to be critical. He agreed with Dr. Macdonald that Dr. Bruce had not laid before them any evidence that went to prove that this bacillus had anything to do with the causation of acute mania. The treatment of certain forms of insanity by the artificial production of abscesses by turpentine had been advocated several years ago in Italy (see *Journal of Mental Science*, July, 1897, p. 612), and the results recorded

had been excellent, but he believed he was right in stating that the treatment had been abandoned in that country now. He would like to know if Dr. Bruce had ascertained if the bacillus he had isolated was identical with that found by Bianchi and Piccinino in acute delirium. He was surprised that Dr. Bruce had not attributed any importance to disorders of the gastro-intestinal tract in the causation of acute mania. There was now satisfactory evidence that a large proportion of such cases were really dependent upon toxic infection from the alimentary tract.

Dr. URQUHART.—Dr. Bruce's paper has not been a simple one to write; it is a paper which evidently has cost him much trouble, and there must have been a great deal of arithmetical work in counting up these leucocytes in all these cases. It is somewhat difficult for anyone to follow Dr. Bruce's observations properly without going to Murthly and seeing the work that is done there. Lately I had the advantage of having one patient examined there, and if the case could have been followed up to the end it would have shown results similar to those in the fourth chart. I hope that you will accord a very hearty vote of thanks to Dr. Bruce for making this elaborate investigation.

Dr. IRELAND.—Yes. We are, I am sure, extremely grateful to Dr. Bruce. (Applause.)—If you have anything to say in reply, Dr. Bruce, we will be glad to hear you.

Dr. BRUCE.—I don't know that there is much to reply to. In regard to Dr. Easterbrook's observations, I must say from my observations of leucocytes that I believe their action to be just as important as changes in the protoplasm of the cell. As to the remarks about pus-producing, it is nonsense to say that you cannot talk of the necrotic area produced by turpentine as an abscess. You can produce an abscess by irritants; if what you call an abscess is a thing full of pus, then you get it. Then as to people coming forward to have abscesses made: I shall be glad to make abscesses in anyone who will volunteer. It is a very striking point that out of twenty-four abscesses sixteen were absolutely sterile.

Dr. MACDONALD.—A sterile abscess?

Dr. BRUCE.—Yes. What you are arguing about is the definition of an abscess. My definition is a dead area caused by a toxin or irritant, and that is a view now very generally held. As my paper threatened to be too long, I shortened it, and I did not tell you that I had made observations on the skin of acute cases and never got this bacillus. I examined the intestinal tracts of six cases, and I got the bacillus in three. I agree with Dr. Ford Robertson that changes or toxins formed in the intestinal tract have something to do with the production of acute mania, but in a whole lot of diseases, such as phthisis, you always get intestinal symptoms. In my opinion the intestine is the point of attack of organisms if such organisms are the cause of mania. The bacillus does not resemble the bacillus of Bianchi. Turpentine is the only substance which produces a prolonged leucocytosis. I have tried other substances, such as nucleic acid and cinnamate of soda, but I have not been able to produce the same leucocytosis as with turpentine. Turpentine is not so inhuman as you would think; out of twenty-four cases I have only had three that complained of the pain. The great majority of these cases of acute mania are very insensible to pain; they don't seem to feel it. I take a small quantity of carbolic acid, which makes the skin anæsthetic and purifies it at the same time, and I inject the turpentine at this spot. After three or four days the pain and inflammation are gone, and you have a big swelling which acts as a stimulant to leucocyte formation. I don't think that there is anything more I can say to the criticisms you have so kindly made.

The Case of an Unrecognised Degenerate punished by the Law. By EDWIN GOODALL, M.D.

THE case here dealt with is that of a man æt. 35, now a patient at Carmarthen Asylum, formerly a ferryman. He was

admitted from prison, where he was undergoing a sentence of twelve calendar months with hard labour, having been convicted at the assizes of unlawfully attempting to have carnal knowledge of a girl under thirteen years. He was imprisoned on March 24th, 1902; the trial was on May 30th, and he was removed to the asylum on July 1st, symptoms of certifiable insanity having been first observed by the medical officer to the prison on June 26th. The total term of imprisonment was therefore rather over three months.

In the newspaper account of the trial the following remarks appear :—" Prisoner, a rough-looking man, was indicted for a horrible assault on a little girl of somewhat weakly disposition and intellect. It was one of those bestial cases which arise from time to time in all communities to show to what depths of depravity brutes in human form may descend. The prisoner rightly deserved the twelve months' hard labour to which he was sentenced." And again : " His Lordship, addressing the prisoner, said he thought he was very properly convicted."

It apparently occurred to no one that the accused, as well as the person assaulted, might be of weak intellect.

Whilst at the prison the man was placed on the treadmill for a time, and also put to pick fibre, but he could not even do this, being, the chief warder reported, too dull and slow. The doctor also described him as dull, heavy, and slow, dirty and slovenly ; he could not be got to keep his cell clean. Noticing symptoms of insanity finally, the medical officer wrote a certificate, describing hallucinations and delusions connected with the events of the trial. Transferred to the asylum, the mental state was found to be one of congenital deficiency, with recent disturbance superimposed, and characterised by depression, visual and aural hallucinations, fear-inspiring delusions, agitation. The cause of these latter symptoms, in the opinion of the prison medical officer, was worry in connection with his trial. To which I add as an aggravating cause the *régime* of his prison life.

Much difficulty was experienced in getting out the family history. The following only was elicited :—The father drank heavily and died in apoplexy; several of the family also drank; one aunt died paralysed. As regards the patient, the relatives considered that he was right enough in mind—which is not surprising. They stated that he at times drank heavily, and

then was rough and violent. The prison officials informed us that he had been in gaol on nine previous occasions—seven times for drunkenness, once for indecent language, once for theft.

The patient was submitted to anthropological examination, according to a scheme which the present writer brought before the Psychological Section of the British Medical Association in 1901, and the results were compared with the average results in thirty-two normal persons from the same district as patient. These normal cases, I may be permitted to remark, were laboriously and slowly collected, and submitted themselves with a more or less good grace to a minute examination of three to four hours each on the exhibition of silver and beer.

The work of preparing a standard of comparison from healthy persons in different districts of the country will be heavy and tedious, unless divided between many collaborators.

I give here a summary of the conditions presented by the patient. First as regards measurement. Out of 68 measurements of the trunk, limbs, head, and face, he showed difference from the normal standard of from 5 mm. upwards in 35, or one half. Eight other measurements could not be taken because of either acquired deformity interfering therewith, or resistance offered by patient. In 22 of the 35 the difference was over 1 cm., in 13 of which it was over 2 cm. In the great majority of the cases of difference above 5 mm. the measurement in patient was less than normal, there being a *plus* measurement only in 7 out of 35—namely, in the length of the hands (1 cm., and 1 cm. 5 mm. above average), of middle fingers, length and breadth of ears, length of ear-implantation, naso-lambdoidal arc, and greatest distance between great trochanters. In the height-measurements of the head and trunk the patient fell below the average. The facial measurements were from 5 mm. to 1 cm. 8 mm. less than normal in the following:—Breadth between the external angles of the eyes, distance of chin-point from root of nose, of same point from the nose-lip angle, of same point and mouth-fissure, distance between the external angle of the eye and angle of the mouth, the greatest breadth across the malars. All except 7 of the 27 facial measurements (several of which were in duplicate) showed differences from the normal, + or —, though less than 5 mm. A point brought out

was the symmetry of the two sides of the face, which was equal to normal. All the cranial measurements which could be taken (7) showed differences from the normal, and more than 5 mm. in 4 out of the 7. The difference was on the *minus* side in 4. The left hand was longer than the right by 5 mm., whereas in the average of normal cases the hands were equal, there being a difference of 5 mm. (right or left) in only five cases. Patient was not left-handed.

Next, as regards the descriptive signalment. In 50 out of some 115 headings under which the description of the state of the body as regards stigmata is considered, deviations from the average conditions were found— $43\frac{1}{2}$ *per cent.* The principal ones only need be given here. Cranium generally, including forehead, narrow, with fronto-parietal flattening; occiput also flat. A long, narrowish face. Eyes: palpebral fissure of small vertical dimension, especially on one side; asymmetry in direction of palpebral fissures; asymmetry in model of upper lid; ditto in position and direction of eyebrows; exceptional disposition of pigment in iris. Peculiarities in size, shape, and direction of certain teeth—namely, upper and lower incisors and canines. Growth of hair about scapulæ. Unilateral flat foot, and exceptional length of second and third toes. Malformation of chest. Malposition of pinna, both sides; malformation of the helix of ear and its fossa, both sides. Blood-circulation defective, with local varicosity. Incessant irregular (voluntary) movement of various muscles, especially frontal and ocular; the same (involuntary) of tongue on protrusion.

Thus in 50 *per cent.* of the observations coming under the heading of "measurements," and $43\frac{1}{2}$ *per cent.* of those noted under "descriptions," the patient showed departure from the normal standard. To this statement there has to be added the qualifying remark that in the majority of the vertical measurements ("height-measurements" of the scheme), and in certain cranial ones, many of the normal cases showed variations from the average equal to those observed in the patient. Whilst it is, of course, most desirable to multiply as much as possible the number of normal observations, and to ascertain carefully up to what point, on either side of an average figure, variations may normally occur, these desiderata appear most urgent in the case of the peculiarly variable height-measurements.

The above qualification notwithstanding, due weight must

be accorded to the facts that variations from an average occurred in this case in so large a percentage of the two classes of observations comprising the signalment; and that the difference from the average was considerable in such a large proportion of instances.

The deviations from the normal as regards the mental state have already been alluded to.

It may be added that the acute and recent mental symptoms have passed off, leaving the indications of congenital deficiency.

The signalment of this case, therefore, furnishes numerous indications of defective physical conformation, the complement of the evidence of mental inadequacy.

The conclusion pointed to by the examination as a whole is that the patient is a defective—*minus habens*, as French authors have it; *zurückgeblieben*, or *minderwerthig*, after the Germans,—and as such not fully responsible.

I put forward the following propositions :—It is an antiquated, inefficient, and unscientific system which permits of the punishment of a person of this kind. Punishment in such a case is bad on moral, economical, and scientific grounds. The procedure adopted, which is doubtless common in similar cases—namely, repeated imprisonment and discharge after a short term—is not only useless, but injurious to the individual concerned, and unjust towards society. But even when a long sentence is passed, the prison, with its lack of educational treatment and its atmosphere of punishment, is not the proper place for a case such as that described. An adequate knowledge of mental disorders and of anthropometric methods on the part of prison medical officers would prevent the punishment of such cases, and, better still, prevent their going up for trial. I assume, of course, that the authorities concerned would be sufficiently enlightened to pay regard to the representations of their medical officers; that the manifestation of zeal would not be blasted by an official frown.

A comment as regards the trial of this individual and his like. In the present instance there was only one other case, and that of a light nature, on the calendar; and it might well have been that the pomp and circumstance with which the holding of the assizes is surrounded, and the attendant expense, would have been lavished upon a trial the holding of which was surely quite unnecessary.

I submit that this individual, a defective, required, not punishment, but educational treatment, mental and physical, with the teaching of an occupation if possible ; and that it was in the first instance a case for a reformatory, upon the lines of the State Reformatory of New York at Elmira. For an account of this I may refer to the last edition of Dr. Havelock Ellis's work on *The Criminal*, from which I gather that the system of Elmira is being extended over the United States.

If the patient developed satisfactorily he would be allowed out on trial to do work previously found for him. Otherwise he would be detained, preferably under the system of an indeterminate sentence of an unconditional kind. Should he show symptoms pointing to the need for asylum care, he would be transferred to the asylum.

Lastly, as regards anthropometric observation in such cases. "A change in the intelligence, a change in the body," said Lélut, in 1844. "The blot upon the brain will show itself without ;" and it probably does so in a more exact sense than the poet imagined. It is a correlation to be expected, I apprehend, that between cerebral deficiencies and bodily stigmata (superficial, and of internal organs). At the annual meeting of the Association of German Alienists at Munich, in April, 1902, Wolff, Basel, read a paper, with demonstrations on animals, upon the experimental evidence of the influence of the nervous system upon developmental processes,⁽¹⁾ which bears in an interesting manner upon this point. If there be outward and visible signs of inward and spiritual defect (and my case, I submit, though but one, goes to answer this in the affirmative), then it is our business to find and demonstrate them. And such demonstration will probably be our best argument before the sceptical legal fraternity in our endeavour to prove mental deficiency and irresponsibility.

(1) *Allgem. Zeitschr. für Psychiatrie*, Band lix, Heft 5.

Nomenclature of Mental Diseases. By A. R.
URQUHART, M.D.

I HAVE ventured to suggest that we should now consider what we are going to do about the classification of mental disorders. Lately, the Royal College of Physicians of London decided to

revise the *Nomenclature of Diseases*, and publish another edition. The President of this College is on the Committee; as is also Dr. Savage, our colleague in London, who has taken much interest in this question. I was somewhat surprised the other day when I asked for a copy of the *Nomenclature of Diseases* in the Royal Medical Society of London, to find that they did not have a copy in their library—a book which is supposed to guide the profession in the statistical registration of diseases. In 1896, for the third edition, an attempt was made to reform the nomenclature of mental diseases, under the direction of Dr. Hack Tuke and Dr. Savage. In its present state it is still unsatisfactory. The classification with which we have to deal is as follows:—First, there is “*idiocy* (cretinism), and then *mania* (acute or chronic), delirious, hysterical, puerperal, epileptic, traumatic, syphilitic, gouty, from either acute or chronic disease, alcoholic, plumbic, or other poisons.” Acute is an absurd word, because we specially want to mark the duration. Acute should be rendered Recent. Then there is “*melancholia* (acute or chronic), delirious, hypochondriac, climacteric, puerperal, epileptic, syphilitic, acute, other diseases.” Then there is “*dementia* (primary or secondary), senile, climacteric, puerperal, epileptic, traumatic, syphilitic, acute, other diseases.” Then there is “*mental stupor*, anergic, delusional.” Then there is “*general paralysis*.” That is not a mental disease. Lastly, there is “*delusional insanity*.”

I refer now to Skae's classification, and always desire to speak of that with the utmost respect, because it was Skae who first in this country adequately drew public attention to the fact that insanity in various forms might be regarded as variously dependent on physical diseases. Taking the last variation of it from Dr. Clouston's Manual, it runs through the arrangement familiar to you, with a supplemental list of anæmic insanity, Bright's disease, and so on. The whole is mixed up in an olla-podrida, the different forms having no scientific relations to one another.

When Dr. Robertson, of Larbert, heard that I was to speak on classification, he kindly sent me the papers which have been handed round, showing that he had approached the subject from very much the same point of view as myself.

The most important recent development for us is the toxic causes of insanity, and the question now is whether we have

advanced so far as to tabulate these toxic causes. Some of them are indubitable ; and I think that, as time goes on, we shall be able to increase the number of cases under toxic causes, and certify them with greater correctness.

There is no doubt whatever that we must, as yet, stand by Griesinger's classification, and arrange mental disorders from the point of view of symptoms. Broadly, we have never got beyond that, and we would be doing well, I think, generally to continue to use the words and the classification which he formulated. Meynert tried to introduce a pathological classification, and I did my best for some years to pigeon-hole all cases under that tentative scheme, but had to give it up, because the time is not yet ripe. The question to-day is whether we can improve upon Griesinger's classification, connecting it with Skae's classification ; that is to say, adopt a classification which will characterise the symptoms, and which will also indicate the etiology, exclusive of the facts of heredity, which, of course, should be noted in every case. The benefit of describing our cases more minutely, and without cross-entries, would be undoubted. The classification, of course, must be logical—I *cannot* classify rivers, horses, blacksmiths, in one gross lot. There must be some sort of definite relation in the classification, and I think that we might agree on the main features. The proposed scheme which is now before you is not evolved out of my inner consciousness ; it is the result of an extended examination of our records in case-books and clinical sheets. We have been using it in Murray's Asylum for four or five years, and have found it to be a practicable method of dealing with the classification of cases of insanity. As above indicated, the facts regarding heredity are noted in addition to the symptomatic and other etiological details, as well as the facts regarding neuroses.

It is difficult to decide what constitutes neurosis, *e. g.* whether such diseases as apoplexy are to be excluded. It is remarkable how many of our patients have had ancestors who have succumbed to apoplexy ; and I think it should be included amongst neuroses, as well as the more ordinary forms of hypochondria, somnambulism, etc. I have not attempted to deal with these in detail, because the College does not include these milder cases of disorder, but we must consider them in regard to the revised statistical tables of the Medico-Psychological Association

now in progress. I had the advantage of hearing the first debate of the committee which is preparing these tables, and it seemed to be full of promise. There will be more useful results if men will put down only what they know, and only deal with figures that are true. There is really a necessity for that discrimination. I hate the word "idiopathic." It is a mere attempt to cloak our ignorance. Therefore you will not find that word in this scheme. Far more effective is the term "unknown," frankly stated.

DIAGNOSIS OF MENTAL DISEASE, AS CLASSIFIED.

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| <ol style="list-style-type: none"> 1. Melancholia—recent, chronic, recurrent. <ol style="list-style-type: none"> (a) Simple (without delusion). (b) Hypochondriacal. (c) Hysterical. (d) Delusional. (e) Excited. (f) Resistive. (g) Apathetic. (h) Abstinient. (i) Suicidal. (j) Homicidal. 2. Mania—recent, chronic, recurrent. <ol style="list-style-type: none"> (a) Simple. (b) Hysterical. (c) Acute. (d) Acute delirious. (e) Delusional. (f) Abstinient. (g) Suicidal. (h) Homicidal. 3. Confusional insanity. | <ol style="list-style-type: none"> 4. Stupor. <ol style="list-style-type: none"> (a) Primary melancholic. (b) Primary anergic (? lethargic). (c) Secondary. 5. Periodic (? alternating) insanity. <ol style="list-style-type: none"> (a) Circular, intermittent or continuous. (b) Katatonia. 6. Delusional insanity (paranoia)—primary progressive, or secondary. <ol style="list-style-type: none"> (a) Grandeur. (b) Suspicion. (c) Unseen agency. (d) Persecution. 7. Volitional insanity. <ol style="list-style-type: none"> (a) Obsessions. (b) Impulsive. (c) Moral. 8. Dementia. <ol style="list-style-type: none"> (a) Primary. (b) Secondary. 9. Idiocy and imbecility. |
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Note.—The above classification is descriptive of mental symptoms, purely clinical, and, proceeding on the decision of Griesinger, "the natural basis of classification must be founded on observed facts—states of depression, elevation, or weakness."

To correlate mental with bodily conditions, the following should also be used :

ETIOLOGICAL CLASSIFICATION.

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| <ol style="list-style-type: none"> A. Epochal— <ol style="list-style-type: none"> (a) Adolescent. (b) Climacteric. (c) Senile. B. Exhaustive. <ol style="list-style-type: none"> (a) Pregnancy, puerperal, lactational. (b) Masturbation. (c) Sexual excess. (d) Over-exertion, mental and physical. (e) Neurasthenia. C. Visceral— <ol style="list-style-type: none"> (a) Anæmia. | <ol style="list-style-type: none"> (b) Cardiac. (c) Pulmonary. (d) Ovarian and uterine. (e) Other visceral disorders. D. Toxic— <ol style="list-style-type: none"> (a) Exotoxic—alcohol, morphia, cocaine, lead, etc. (b) Autotoxic by deficiency—myxœdema, cretinism, ovarian, etc. (c) Autotoxic by excess—gout, rheumatism, chorea, diabetes, albuminuria, etc., ? constipation. |
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| <p>(d) Microbic—syphilis, phthisis, septicæmia, fevers, influenza, etc.</p> <p>E. Degenerative—</p> <p>(a) Developmental arrest, mental and physical—idiocy, imbecility.</p> <p>(b) Morbific habits of life.</p> <p>(c) Epilepsy, congenital or acquired.</p> <p>(d) General paralysis of the insane.</p> <p>(e) Other organic diseases of</p> | <p>the encephalon—atheroma, thrombosis, embolism, apoplexy, tumours, etc.</p> <p>F. Accidental—</p> <p>(a) Traumatic.</p> <p>(b) Insolation.</p> <p>(c) Fright or shock—post-conubial, post-operative, etc.</p> <p>(d) Deprivation of the senses.</p> <p>(e) Communicated.</p> <p>G. Unclassified—</p> <p>(a) General.</p> <p>(b) Metastasis.</p> |
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Note.—The facts of heredity should be noted with this classification, either insanity or neuroses—anaesthesia, hyperæsthesia, capricious temper, eccentricity, hysteria, hypochondria, neurasthenia, insomnia, somnambulism. Other manifestations of cerebral or nervous instability or disease, *e. g.* apoplexy.

1. I now suggest that the first class ought to be "*melancholia*," and separated into recent, chronic, and recurrent cases, reserving the word "acute" to indicate the severity of symptoms rather than the duration of the disorder. Acute delirious mania is a very marked form of mental disorder which requires no further symptomatic indication, but "acute" signifies that it is something more than recent. Then we have to consider whether the word "recent" will be held to include cases that have occurred within twelve months or within six months; the term "recurrent" must also be defined for our statistical purposes. In my opinion, a second attack may be considered a relapse, but a third attack should be classed as recurrent. This arbitrarily affects the duration of the disorder. In a recurrent case we must go back to the date of the first attack as a basis. It is not quite clear whether this should be done in reference to a second attack; perhaps my custom to give the benefit of the doubt and state the shorter period may be upheld.

Then melancholia in this suggested nomenclature is divided into simple, hypochondriacal, hysterical, delusional, excited, resistive, apathetic, abstinent, suicidal, and homicidal. These are descriptive words as regards the form of mental disorder.

2. "*Mania*" is similarly dealt with, as follows:—Mania (recent, chronic, recurrent), simple, hysterical, acute, acute delirious, delusional, abstinent, suicidal, and homicidal. 3. "*Confusional insanity*" is inserted here in deference to the generally expressed desire of the meeting. 4. Fourth, we have "*stupor*," primary melancholic, primary anergic (? lethargic),

secondary. Primary anergic is an unsatisfactory term, but I have seen no better suggested to differentiate it from that stupor which is the result of an intensely delusional condition. 5. Fifth, we come to "*periodic insanity*" (circular), intermittent or continuous, katatonia. "*Alternating insanity*" has been proposed as a more definite term for this class of cases. 6. Sixth, we have "*delusional insanity*" of grandeur, suspicion, unseen agency, persecution, querulous. "*Paranoia*" is suggested as a more convenient term—primary progressive, or secondary. 7. Seventh, we recognise "*volitional insanity*," obsessional, impulsive, moral. 8. Eighth, there is "*dementia*," primary, secondary. 9. Ninth, "*idiocy and imbecility*." Imbecility is not a statutory word; if a patient is returned to the Board of Lunacy under form A 1 as an imbecile, that is not accepted, because the imbecility may be too slight to justify detention. The term must be strengthened by facts indicating *insanity*. Dr. Robertson has divided these cases into high-grade and low-grade degenerates.

If you accept this scheme, it is further necessary to supplement it with etiology, beginning with the facts of heredity, so that the case is further explained on your being informed whether the mania is (A) *Epochal*—adolescent, climacteric, or senile; or (B) *Exhaustive*—pregnancy, puerperal, resulting from masturbation, sexual excess, over-exertion, mental, physical neurasthenia; or (C) *Visceral*—anæmia, cardiac, pulmonary, ovarian, etc.; or (D) *Toxic*—*exo-toxic*, alcohol, morphia, etc.; *auto-toxic*, by defect, myxœdema, or by excess, acute rheumatism; *microbic*—phthisis, syphilis, etc.; or (E) *Degenerative*—epilepsy, general paralysis, etc.; or (F) *Accidental*, traumata, etc.; or, lastly, (G) *Unclassified*, general, and metastatic.

Sometimes there is no difficulty in placing cases; *e.g.* a young lady became maniacal after a double ovariectomy. Treated with ovarian extract she rapidly recovered. Similarly, ovarian extract relieves certain cases of insanity at the climacteric. It is the cure for this autotoxic mental disorder by deficiency. We may well refer to the work of Schroeder van der Kolk, in the middle of last century, in which he correlated mental disorder with somatic conditions, and specially sympathetic mania proceeding from the colon. We know how common intestinal disorder is in our practice, how the bacteriological importance of this condition has been insisted on by Dr. Ford Robertson.

Is this condition to be described as autotoxic by defect ; by defective protection against the toxic elements ; or by excess of these elements ? I trust that Dr. Robertson will give us some indication of his opinion on this point.

I think that we might venture to recommend some such scheme of classification as now submitted to the College of Physicians through our representative on the new committee appointed by the College, and that we should ask our Statistical Committee to consider it for their purposes.

DISCUSSION

At the Meeting of the Scottish Division, in the Royal College of Physicians, December, 1902.

Dr. IRELAND.—We may congratulate ourselves that we have had three subjects for discussion to-day, each of which might have filled an ordinary meeting. I don't know any man in the Association whom I would trust more to draw up a classification of insanity than Dr. Urquhart, who has great experience, great clinical skill, and great learning in the lore of insanity. When I first became a member of this Association, and that is some time ago, there was a great deal of discussion regarding the classification of insanity. Dr. Skae's classification was the one which was most favoured here, and Sir John Batty Tuke improved on Dr. Skae's. There was also a memorable debate between Sir J. Crichton Browne and Dr. Clouston on this subject. I would be very well pleased to see the younger members take an interest in classification, which is a very important question. I quite agree with Dr. Urquhart that you still must classify by the symptoms. There is talk of a scientific classification of insanity based on pathology, but we are not ripe for that, although, as time goes on, our classifications based on symptoms are bound to be deposed by the advance of pathology. Take myxœdema, for example ; Dr. Urquhart has separated idiocy from dementia. Sporadic cretinism goes along with myxœdema ; it has the same pathology, and we cannot afford not to take notice of the connection between the two. I also would remark upon Dr. Urquhart's classification that in almost every book which I have read upon insanity, general paralysis is treated as a special form. Now here Dr. Urquhart puts it in the etiological list so far as divided, syphilitic and other forms of general paralysis. Perhaps he is right, but general paralysis has such specific symptoms that he would be a bold author who did not treat of general paralysis in one of his chapters. As to the term "imbecile" not being recognised by the Board of Lunacy, it is mentioned in a report that under certain regulations a licence shall be given for the education of imbecile children. Here the word is used by the Board of Lunacy.

Dr. ROBERTSON (Larbert).—I have been called into this discussion quite accidentally. I saw from the billet that Dr. Urquhart was to speak on classification, and sent to him the classification which I adopted, and which is very similar to his. The point about "imbecility" which has cropped up just now is not a question of whether the term is recognised or not. The reason of the objection of the Board of Lunacy is that it is not allowable to send imbeciles to asylums. Those who are sent to asylums are *insane*. An imbecile is not an insane person by the law. Imbecility is not recognised as a form of insanity in the Statute, but if you enter on the certificate that the person is imbecile and insane, then that will be accepted. The term *imbecile* is useful as signifying a difference of degree between imbecility and idiocy ; an imbecile is not such an idiot as an idiot, and there is a lesser degree of feeble-mindedness. I suppose that this discussion is to assist the Registrar-General in classifying the causes of death. The curious thing is that in asylums mental diseases are never stated as the causes of death. No one certifies melancholia as the cause of death ; it may be phthisis or typhoid fever, or anything except the form of mental disease under which the patient happens to labour.

Dr. IRELAND.—Would you not state it as a secondary cause?

Dr. ROBERTSON.—You can enter as many causes as you please, but I do not think that the form "mental disease" is ever mentioned; yet it is in these very cases it should be mentioned, if the tables are to be of any value. I agree with Dr. Urquhart that in the nomenclature of insanity you should always mention the distinct features of the insanity, the symptoms, and the etiology. No system of nomenclature is perfect, but it is very imperfect if you only mention one feature. There is no difficulty in stating that a person suffers from melancholia brought about by alcohol or some other cause, and such a statement gives a much more accurate and complete knowledge of the disease than the mere fact that it is melancholia. With regard to the proposed position of general paralysis, Dr. Ireland says that it is usually given under a heading of its own, and that Dr. Urquhart has placed it in the etiological list. I think that the mental symptoms should be stated, and say that a patient is suffering from acute mania or from dementia with general paralysis. Although it is general paralysis, that is no reason why you should not make a statement as to the mental symptoms under which the patient is labouring; there may be symptoms of melancholia or dementia. Then, if I might criticise the table of suggestions, I should say that periodic insanity is not a distinct type of insanity according to symptoms. It is either melancholia or stupor, and to put it down as a separate variety is quite wrong, from the point of view of symptoms. You are taking one feature of insanity, its periodicity, and placing it in a distinct class, whereas with regard to all the other varieties you are taking the symptoms and not the periodicity. I would not include periodic insanity as a type of insanity. Then I think there is an omission. We in this country for a long time past have been guided by Dr. Clouston's book with regard to the classification of insanity, and very properly so; but he has also omitted cases which are more confused than maniacal. These have been referred to, but I think that Dr. Clouston has not laid the stress on this particular class of cases that he might have done. The patients appear to be more or less demented, but we do not use the term dementia because the patient recovers; we cannot use the term stupor, and I think the term "confusion" accurately describes the condition. In my opinion there should be recognition of a new form of insanity under that heading. I have called it delirious insanity, and classify it into simple and acute delirious insanity.

Dr. EASTERBROOK.—I desire to call attention specially to one point, and that is the use or abuse of the word "acute" in psychiatry, as meaning "severe." The word "acute" is used in the terminology of other diseases as referring mainly to duration, and as the antithesis of chronic. It should be similarly used in psychiatry. Every disease may be regarded as the action of an irritant on the organism. On the one hand we have the *intensity* of the irritant, and on the other hand the *duration* or length of time during which it acts. These are two distinct aspects, and the classifying adjectives that are used in clinical descriptions are, as regards *intensity*, mild or simple, moderate, and severe; and as regards *duration*, acute or recent, subacute, and chronic. In cases of mania, if you use these qualifying adjectives from the combined points of view of duration and intensity, you can describe all cases with precision and accuracy thus. A person may be suffering from mild or simple mania, or moderate mania, or severe mania, according to its intensity; and according to its duration, from acute or recent mania (say up to six months), or subacute mania (say six months to two years), or chronic mania (say any period over two years). Combining these two aspects in any particular case, a person may be described, with a clear conception of the condition present, as suffering from acute (recent) mild mania, acute moderate mania, acute severe mania, and similarly for subacute and for chronic mania; and also for melancholia, stupor, and so on. As an instance of the abuse of the term "acute" in psychiatry, it is common to see a chronic maniac during a relapse of severe mania described as in a state of "acute mania." Now a lunatic can hardly be described as both "chronic" and "acute" at the same time without an abuse of language.

The SECRETARY.—My difficulty is to know when a case is one of melancholia and one of mania. If you get a case of acute mania it is all right, and you can classify it, and if you get recent melancholia you can classify that; but there are a great number of cases which lie on the borderland. In fact, to such an extent does this occur that I am beginning to believe in the American idea that melancholia and mania are different phases of the same disease. I go against Dr. Robertson's

opinion that periodic insanity should be cut out, because I think it differs entirely from the continuous mania that you get in the adult and from the ordinary forms of melancholia. It has many different symptoms. I think that confusional insanity is an omission from the table, and it should be added.

Dr. URQUHART.—It is there.

The SECRETARY.—Not as a heading.

Dr. URQUHART.—No, but it comes under these symptomatic types.

The SECRETARY.—But the confusional insanity I refer to is a distinct type of disease. A paper was written on the subject by Dr. Conolly Norman, and quite recently I have seen several cases. I believe it to be a disease by itself. The patients have a distinct febrile attack, which is followed by many symptoms, many of which are nervous symptoms. It is one of the few forms of insanity in which you do get nervous symptoms. It is a form of disease that is easily diagnosed once you have seen it and have had the symptoms pointed out to you. I think there ought to be a number 9 in the table. I am thoroughly in favour of Dr. Urquhart's scheme, and I think that this classification should be adopted. It is a great advance on the old classification, and of course if we are to wait until we reach finality, then we will almost have to wait until the end of time.

Dr. TURNBULL.—I would like to refer to the question which has been raised regarding congenital insanity. Two or three years ago, if you made returns to the General Board of Lunacy in which only congenital imbecility was certified, your reports were returned to you for amendment. Surely that is not done now? Lately I have sent in returns of congenital imbecility, and they have not been sent back to me for amendment. Then as to the word imbecile not being statutory,—no more is the word mania, which we often use. If you look up the Statute you will find that the person who comes under the Lunacy Acts is a person certified by two medical men; and it does not say what the exact mental condition is.

Dr. ROBERTSON (Larbert).—The Statute says that you shall not admit imbeciles into asylums. Asylums are for insane people, and not for imbeciles.

Dr. TURNBULL.—But where is the definition of insanity which excludes congenital unsoundness of mind?

Dr. ROBERTSON.—The law excludes imbeciles. You may say that it is something else.

Dr. TURNBULL.—I speak subject to correction, but when the point was raised I looked into the Statute, and you will find that there is no definition making a distinction between so-called ordinary insanity and congenital insanity.

Dr. ROBERTSON.—You have to certify the patient.

Dr. TURNBULL.—But you have to state what the patients are suffering from. My impression is that of late the General Board have not adhered to the practice referred to. I have sent papers certifying congenital imbecility only, and they have not been returned to me, although, of course, when I did find mania added to the congenital insanity, then I put in both. Speaking more to the subject of the paper, we have to take a symptomatic classification, because one founded on pathological processes, which would be the ideal, is not possible in the present state of our knowledge. The cross-classification according to causes which Dr. Urquhart introduces adds much to the value of his table. A point one feels is that all these classifications are only temporary. A patient may be suffering from mania at one time and melancholia at another, and therefore the classification is so far imperfect, but it is the nearest one can come to perfection at present. I agree that confusional insanity should be added to the list. It is somewhat different from what we understand by melancholia, mania, dementia, and stupor. The clinical group indicated by periodic insanity is, I think, properly included.

Dr. ROBERTSON.—You have a classification there according to symptoms. Now periodicity is not a symptom; I would call it either mania or melancholia, or what it was at the time. I quite recognise the clinical type; it is not a new form.

Dr. URQUHART.—This discussion is extremely valuable to me, because it is a criticism of these proposals. I maintain that general paralysis is not a mental disease. We must report it separately, and it is proposed in the new tables to return it like epilepsy, in a column by itself, so that, for instance, you will be able by these new tables to tell how many cases of general paralysis are syphilitic and how many are not; you will be able to combine the various cases in a table in a way you could not do formerly, even in large asylums. Periodic insanity was

inserted to meet a common and frivolous objection to all classification—namely, that you cannot tell what an acute maniac will be in the future; therefore you must not classify him as an acute maniac. Katatonia is surely as clearly to be differentiated as confusional insanity. I am perfectly willing to place confusional insanity after mania as No. 3 of the list. It is a very definite disorder, and might therefore be removed from the subordinate position originally assigned to it.

Dr. ROBERTSON.—Seeing that you have mentioned the figures just now, I think that *stupor* should come in after mania. I would make *stupor* No. 3.

Dr. URQUHART.—Then about this question that Dr. Easterbrook raised; it does not very much matter to us whether we use the term “recent” or “acute” if we are agreed as to the meaning of each.

Dr. EASTERBROOK.—Yes, and that is why we should keep acute as meaning recent.

Dr. URQUHART.—I fancy from what I heard the other day that “recent” will be adopted. I am afraid you cannot get rid of the term “acute” in favour of “mild, moderate, or severe.” If the Board of Lunacy have accepted “imbecility” only in a return from Dr. Turnbull, it has been accompanied by strong certificates. There is no doubt that “imbecility” is not a statutory term, and unless you add something to bring it within the statutory meaning it will not be accepted, for imbecility does not necessarily mean that degree of mental unsoundness which demands detention in an asylum. “Imbecile children” are mentioned in a Scottish Act, as Dr. Ireland said, but I presupposed that the debate was in reference to asylum returns.

Dr. ROBERTSON.—Imbeciles have been distinctly excluded.

Dr. TURNBULL.—I would like to get the reference.

Dr. URQUHART.—I think that our division should recommend this classification generally, without committing themselves to the details, for the consideration of our committee in London. That is all I desire to be done with it. I shall approach the President of this College myself.

Dr. IRELAND.—I daresay there would be no objection to Dr. Urquhart's classification as a whole; in fact, there has been a general approval of it, and there would be no difficulty in recommending what he has suggested.

Dr. EASTERBROOK.—As the only member of the Statistical Committee present, I can assure you that it will be submitted for their consideration. I suppose that that is all that one can do, and I would mention to them that it met with general approval here.

Dr. IRELAND.—Of course Dr. Urquhart knows about paranoia? It has been frequently patronised in this country. You put that under delusional insanity?

Dr. URQUHART.—Yes, but that will be a question for the Statistical Committee. It is a much more convenient term than “delusional insanity,” but whether it should be accepted finally I am not prepared to say.

Dr. IRELAND.—I remember one German putting half of his cases down as paranoia.

Dr. URQUHART.—Probably he was pleased with the blessed word.

The Care and Treatment of Persons of Unsound Mind in Private Houses and Nursing Homes.⁽¹⁾ By ERNEST W. WHITE, M.B.Lond., M.R.C.P.Lond., President Elect of the Medico-Psychological Association of Great Britain and Ireland; Professor of Psychological Medicine, King's College, London; Resident Physician and Superintendent, City of London Asylum.

MY paper to-day is the natural outcome of the address by Sir William Gowers upon “Sanity and Insanity, Lunacy and

Law, the Views of a London Hospital Physician, particularly in regard to Private Patients," given at our last general meeting in London. The discussion which followed was hardly worthy of the subject. Most of the earlier speakers, although eminent general physicians, had had little or no experience in the care and treatment of the insane; therefore, when the turn came for those practically acquainted with mental diseases to speak, the hour was advanced, the audience was weary, and an all too exacting brevity resulted.

To-day the alienist's side of the question can be fairly stated. My wish is to deal with it as briefly and appositely as possible, in order that the discussion may be as thorough as we can make it. I hope all who have had practical experience of single care, and of the treatment of mental cases in nursing homes, will assist us in our search after truth, that the best results may accrue to those who suffer from this, the saddest form of human ailments. I propose to treat the subject by a series of questions and answers, with illustrative cases here and there.

What is certified single care? It is the care and treatment of a duly certified person of unsound mind in a private house. The forms for admission are identical with those for the admission of a private patient to a public or private asylum or registered hospital. There is a like order made by a judicial authority. The medical attendant takes the place of the medical officer in institutions, and must visit at stated intervals and make the customary reports to the Commissioners and Visitors in Lunacy. A registered practitioner with whom a single patient resides cannot act as medical attendant. The residence is approved by the Commissioners in Lunacy, and the patient visited periodically by them and the medical and other visitors for the county or borough. Chancery patients are visited by the Lord Chancellor's Visitors in Lunacy. Facilities of access are given to friends by Statute. Thus abuses are guarded against, and there is efficient official supervision.

What are the advantages of certified single care? They seem to be—

1. Privacy.
2. Domesticity.
3. Secret visits of friends.

4. Avoidance of the stigma of treatment in a lunatic asylum.

1. *Privacy*.—The rich and well-to-do try their utmost to keep secret the mental breakdown of any member of the family for well-known reasons; hence single care at a distance from home is the desideratum.

2. *Domesticity*.—The upper classes often dread the contact of their relatives with other insane patients, and complain of the lack of the comforts of home life in public and private institutions. These objections are now removed by the villa residences attached to public and private asylums and hospitals for the insane.

3. *Secret visits of friends*.—In single care the relatives, if so disposed, can visit unobserved, and much more frequently than they can in an asylum or hospital.

4. *Avoidance of stigma of insanity*.—The sting of certification is in the magisterial inquiry. Young and inexperienced justices often investigate the cases more fully than is necessary. They place too little reliance upon the facts contained in the medical certificates. The terrors of certification are thereby increased. The form of the medical certificate needs revision; the term "alleged lunatic" should be removed. The word "asylum" should be applied only to an institution for "the chronic and incurable insane." "Hospital for mental diseases" should be used for an "institution for acute and curable cases." The terms "lunatic" and "lunacy" should be removed from the Statutes, "person of unsound mind" and "insanity" taking their places. For years past the terms "lunatic, lunacy, and pauper" have been forbidden at the City of London Asylum, and the word "asylum" only used for statutory purposes.

What are the disadvantages of certified single care?

1. The absence of skilled medical treatment.
2. Unskilled nursing.
3. Monotony.
4. Insufficient moral control.
5. Interference of friends.
6. Limited supervision.
7. Want of tact and business capacity on the part of the custodian.

1. *The absence of skilled medical treatment*.—The general

practitioner as a rule knows but little of the treatment of mental disease. Psychological medicine has only recently become compulsory in the medical curriculum. Moreover I am sure you will all agree with me when I state that the knowledge of the proper treatment of mental diseases is not to be acquired in the rounds of general practice or in the consulting room, or even, at present, within the wards of a general hospital.

2. *Unskilled nursing*.—The nurses (male and female) having charge of single patients have, as a rule, had no special training in the management of mental cases, and, although perhaps hospital trained, are quite unqualified for the work. No nurse is qualified to undertake a mental case in single care unless possessed of the nursing certificate of the Medico-Psychological Association, which is a recognised guarantee of efficiency. The responsibility with single patients is the greater because the nurse, from want of skilled supervision, is so frequently thrown upon her own resources.

3. *Monotony*.—We all know of the many associated amusements and means of recreation provided in institutions for the insane. How dull must be the life of the patient in single care in this respect!

4. *Insufficient moral control*.—The moral decadence of the upper and upper-middle classes when insane is far greater than of the agricultural and industrial populations. Sedentary life, luxury, and high living tend to bad habits. Self-abuse is far more common amongst private patients than amongst the rate-paid. The moral control—I would rather term it “school discipline”—of our institutions is one of the most potent means we possess for successful treatment. The day is apportioned out to meals, employment, recreation, and amusements. The will is made subordinate to others, bad habits are corrected, and in many instances our patient is thereby conducted back to rational health.

We admitted in October last a lady who had been under certified care since the previous January—that is, for upwards of nine months. Upon admission she had hallucinations of hearing, her expression was vacant, she walked about aimlessly, did nothing, was faulty in habits, wet, etc., and was drifting to dementia. We put her under proper discipline, roused her from her lethargy, gave her shower-baths morning and evening, which have been continued to the present time. To-day

(December 15th) she is industrious with her needle, bright and thoughtful of others, takes part in the associated amusements and recreations, plays the piano and sings well, has regained her self-respect, and is most tidy in her appearance and dress ; in fact, is rapidly approaching convalescence and discharge, to the intense delight of her relatives and friends. (She left recovered on February 6th.) Now in single care the sufficient moral control of such a case as this is wanting.

5. *Interference of friends.*—With single patients the friends either get them removed as far from home as possible, satisfy themselves that they are well housed, well clothed, well fed, and kindly treated, and visit them only when obliged, for sympathy for the insane relative generally quickly dies ; or the patient may be visited much too often, the treatment of the medical attendant and management by the nurse being interfered with, to the great detriment of the chances of recovery.

6. *Limited supervision.*—Certified single patients are taken for profit by needy practitioners, decayed ladies, etc. The official supervision of these custodians is limited. How can we guarantee in all cases humane treatment by nurses ? also proper food and environment at all times ? We must remember the best mental trained nurses remain in the asylum service or become attached to the better nursing institutes of the metropolis. Therefore we have not always the most reliable people in charge of the patients under consideration. On the contrary, it is an absolute fact that in a great number of cases the nurses in charge have not had any mental training whatever ; frequently they are hospital-trained nurses who are sent out by institutions to whatever case may turn up. I have heard also of asylum laundrymaids posing as mental nurses on the books of such institutions.

7. *Want of tact and business capacity in the caretaker.*—Decayed ladies and retired nurses are not possessed of much business capacity, tact, or energy in the duties of the house.

What is uncertified single care ? It is the taking charge of a person of unsound mind (not under certificates) in a private house or nursing home. I believe hundreds of insane patients of the upper and upper-middle classes are at the present time under care and treatment without being certified in the various counties of England and Wales, not to say the Channel Isles and near the Continent. What happens is this :—A member of a

family, probably with neurotic inheritance, develops mental symptoms. The parents dread certification, and, because of the so-called "stigma of insanity," avoid as long as possible the alienist physician being called in, but consent to a "nerve specialist" being consulted. To the neurologist the patient is taken; he duly prescribes and advises. After a short time the symptoms become more pronounced and home treatment is impossible; the patient must go away. Then the assistance of the decayed gentlewoman is sought, that she may undertake the remunerative care of the insane person; or a nursing home is selected, with which some practitioner in a suburban or rural district is connected. The neurologist sees the case from time to time in consultation. He considers himself well qualified to treat this form of disease, and in the interests of humanity (as Sir William Gowers tells us) is accessory to an evasion of the law. Ultimately, in many instances, owing to an exacerbation of the symptoms (some attempt at suicide or homicide, etc.), certification becomes imperative, and to a recognised institution for mental diseases the patient is sent. It is from these cases many of us have to glean our recoveries, and a difficult task it is at so late an hour in the day of disease. Let us consider two or three cases to illustrate uncertified single care.

Several years ago I was asked to see a lady patient suffering from an attack of acute mania. She was at a farmhouse at a short distance from a country village. Upon arrival I jumped out of my trap and was walking through an orchard to the house, when I beheld the patient among the fruit trees, but in the broiling sun (it was early in August). On either side of her was a hospital nurse, the one pulling one way, the other the other. The patient, a fine muscular young lady of twenty-five years, was semi-nude, with many bruises of the neck, chest, and arms; her hair was dishevelled, her clothes were untidy and torn, and she did not appear to have been properly washed and attended to. Sedative medicines had been given, even to nausea. All were of no avail. The nurses had not had asylum training; the patient was not taking sufficient food; the bowels were not properly looked after; and she was not under proper moral control, although physical control was by no means wanting. Secrecy was the order of the day, so to this out-of-the-way place she was sent, and visited by a medical practitioner daily. The case had been drifting for about ten weeks. I told the father

the patient ought to go to an institution for the insane, and she went without delay. She improved at once, and was discharged, recovered, within two months. This lady has had no relapse, but has since attained success as an authoress.

I will now give you a case of uncertified single care in which the alienist even failed, and you will see the reason. Six years ago I was asked to visit in consultation a lady suffering from puerperal insanity. The attack had occurred five weeks after parturition, and the symptoms at first were a mixture of mania and melancholia. The patient had a very bad family history. The father died of general paralysis of the insane, a brother had for some years been insane, and a sister has since had an attack of mania from which she has recovered. The family is one of typical neurotic inheritance. We had ample means at our disposal, and an excellent opportunity offered for treating an acute case (uncertified) under the most favourable conditions, for the house was a large old manor-house with extensive grounds, surrounded on all sides by a wall some ten to twelve feet high. We converted a suite of rooms on the ground-floor into quarters for our patient, who took exercise for hours daily in the old-world gardens, and we secured trained nurses for night and day duty (one had been trained at the City of London Asylum); in fact, converted a most suitable residence into a complete private asylum for one patient. The family medical attendant visited twice a day. I met him in consultation three times a week. This went on for two months. Sometimes the patient was better, sometimes worse. At last I said to myself, "This patient won't get well here. She is not under sufficient moral control. She knows she is at home, in the home of which she has been mistress for years; she does not therefore subordinate her will to others. She must be certified and go to a private asylum." The husband, who was tenderly attached to his wife, but a man of sound common sense, agreed with me at once; not so, however, the mother-in-law! I then proposed that another alienist should see the case with me, and the husband said, if he were of the same opinion as myself, the patient should go from home, even at the risk of the ire of the mother-in-law. The consultation was held, we agreed, and the patient went to a private asylum to improve quickly, and to recover under moral discipline in about three months.

And now let us consider a case of uncertified single care in which a good and permanent recovery resulted. Some sixteen years back I was consulted regarding a physically healthy young lady who had developed suicidal tendencies and homicidal impulses. She had threatened to drown herself, and had attempted to strangle her sister, with whom she was sleeping. There was no inherited tendency to mental disease. The causes were indolence, self-indulgence, and the habit to which I have alluded as so common in the upper classes. The relatives begged that she should not be certified. Fortunately I knew a medical man who had been an assistant medical officer in a county asylum, and who thoroughly understood the requirements of our patient. Into his house she went, and was never left night or day. In the morning she had a shower-bath on rising. After a light breakfast she was taken for a long ride on a double tricycle with her trained companion. After the midday meal she had another tricycle ride, wet or fine. A diet was arranged with limited animal food. The bowels were carefully regulated, and a suitable night draught given when needed. She improved steadily, and recovered completely in about four months to remain well ever since. In this instance an alienist directed the case with a skilled medical attendant, and trained nurses saw the instructions carried out.

Next let us consider a case where a young lady suffering from incipient insanity was in a nursing home, uncertified, under the charge of a mental nurse for two months, at the end of which time she had to be certified and sent to a public asylum receiving paying patients.

A lady was admitted into the City of London Asylum in July last suffering from melancholia. She was, on admission, agitated and emotional, heard voices which told her of unfortunate occurrences to her friends, thought she had been very wicked, was troublesome with her food, etc. After moral and medicinal treatment she steadily improved, and was recommended for discharge as recovered on December 15th last, then having been convalescent a month. She weighed on admission 7 st. 11 lbs., and on discharge 9 st. 11 lbs. She told me that in the nursing home nothing was done for her, and the life was painfully dull and monotonous; the nurse sat near her all day doing her needlework and seldom spoke, but watched her carefully. There were three other ladies in the

house, of whom she saw but little; she thought they were mental cases.

What are the advantages of uncertified single care ?

1. Avoidance of the so-called "stigma of insanity."
2. Secrecy.
3. The so-called continuity of medical treatment (doubtful if unskilled).
4. Freedom from contact with other persons of unsound mind.
5. Domesticity.

What are the disadvantages of uncertified single care ?

1. Insufficient general and moral control of the patient. There is no legal power of detention, for the patient is in full possession of civil rights.
2. The patient's property is not safeguarded from unworthy relatives, solicitors, medical men, caretakers, and nurses.
3. Frequently there is unskilled medical treatment, or none at all.
4. Unskilled nursing as a rule.
5. Monotony in some out-of-the-world place.
6. Interference of friends.
7. Want of official supervision.
8. Incapacity of caretaker.

The want of official supervision is perhaps the most serious of these disadvantages, for I have heard of inhuman and cruel forms of personal restraint which have been used upon these unfortunate patients, even since the passing of the Lunacy Acts, 1890-91, and is not this what we should expect with no official supervision? In 1893 we sent two nurses to a well-known southern seaside resort for a private patient who had been acutely insane, but uncertified, for seven weeks. The nurses found the patient roped by the wrists and ankles to the four corners of the bed. She was in a filthy state, and she had been tied down for days. Men had been called in to assist in the roping process. The patient's wrists and ankles were much marked, bruised, and abraded. The hospital nurses in charge of the case were afraid of their lives, but upon our nurses clearing the room and removing the ropes, the patient accompanied them without a murmur, and gave no trouble on the journey.

I have heard of another lady being roped to a bedstead like

a monkey to a pole, with just sufficient rope to allow her to attend to the calls of nature.

We recently admitted a lady who for months had been at a seaside resort with a caretaker, in whose house a room had been fitted up as a strong-room, with iron bars in place of the lower panels of the door. An occasional peep at the patient was taken through the "grille." This, I presume, was supposed to be curative treatment under single care. The physician who was an eye-witness in the last two cases is present to-day, and will verify my statements with fuller details. Let there be no disguising the fact, mechanical restraint of an advanced type is often resorted to with uncertified patients in single care by unskilled nurses and heartless caretakers. We, who know how the excited patient frets and struggles even to exhaustion under mechanical restraint, and how fearfully it reduces the prospect of recovery, must raise our voices in no uncertain strain, in the interests of suffering humanity, against any relaxation of the law which will open the gates any wider to such barbarisms.

What is the suggested notification of mental cases? It is that in all cases of mental unsoundness in which certification and compulsory detention seem needless, and in border-line cases, there shall be a system of notification to the Commissioners in Lunacy by any one receiving payment to the effect that "A. B— is a person of unsound mind and is not a proper person to be detained." It has been also suggested that this notification shall be to the local authority. It is presumed, in the first instance, it will be followed by the visit of a Commissioner in Lunacy or some one deputed by the Commissioners, and, in the second, by a medical officer appointed by the local authority.

What would be the advantages of such notification? They would be the same as those given under the heading uncertified single care (*vide supra*).

What would be the disadvantages? These, again, would be identical with those given under certified single care (*vide antea*), with, in addition—

9. Increased official expenditure from the necessary appointment of deputy or district Commissioners to inquire into the numerous class of cases which would rapidly crop up. In an article on "Lunacy Law Reform" in the *Lancet* of December

27th, 1884, I suggested the appointment of Deputy Commissioners in the following terms:—"District experts as medical officers of insanity, occupying analogous posts with those of coroner and medical officer of health, with fixed salaries, these officers to be elected from their experience in the specialty and to be allowed to practise as pure physicians. Their duties would be to examine all supposed lunatics in consultation with the medical man in attendance, to sign all necessary certificates, to visit all single patients and patients in private asylums in their districts, to report thereon from time to time to the Commissioners in Lunacy, and so act as district agents for the Commission, or Deputy Commissioners. They would have power to order the discharge of any single patient, or any patient from any private asylum in the district, should such a course be desirable on account of recovery or otherwise. They would also have authority to prevent the removal of any patient by his or her friends when such removal was calculated to be fraught with danger to the patient or others." Many of the suggested reforms in that article were adopted in the Lunacy Acts, 1890-91. This was not, for the obvious reason—expense.

10. I am afraid notification, unless under the most efficient official supervision, would encourage a continuance of the evasion of the law, or at least would delay proper remedial treatment, in consequence of the patient not being under proper moral control.

What cases are suitable for care and treatment as certified single patients?

1. Quiet and harmless tractable imbeciles.
2. Quiet and harmless chronic demented.
3. Certain general paralytics in the last stage.
4. Hypersensitive patients convalescing from melancholia.

What cases are unsuitable? All others.

What cases are suitable for care and treatment uncertified?

1. Transient cases of mania and melancholia dependent upon drink and abuse of drugs.
2. Certain border-land cases where the symptoms are undeveloped.
3. Other cases in which the symptoms are not severe, and which have a definite exciting cause not likely to be long operative.

How should they be protected against abuses? By proper and complete official supervision. I have been for years past and am still in favour of the appointment of Deputy Commissioners for districts as defined above, such appointments to be made from those skilled in the treatment of mental diseases.

What is the suggested temporary care and treatment of the incipient insane? In 1899 the joint Committee of the British Medical and Medico-Psychological Associations, of which I have been a member by your courtesy since its formation, waited upon the Lord Chancellor at the House of Lords. It urged the necessity of early legislation for the incipient insane. It told him how numberless border-land cases were smuggled away in the country, the Channel Isles, and on the Continent, to avoid legal certification, how their chances of recovery were imperilled thereby, and how the possibilities of inhuman care existed. As a consequence, he introduced into the Lunacy Bill of 1900 the following clause, adapted from the existing clause in Scottish Lunacy Law :

1. If a medical practitioner certifies that a person is suffering from mental disease but that the disease is not confirmed, and that it is expedient, with a view to his recovery, that he be placed under the care of a person whose name and address are stated in the certificate, for a period therein stated, not exceeding six months, then during that period the provisions of Section 315 of the principal Act shall not apply.
2. The certificate must not be signed by the person under whose care the patient is placed.
3. Where a medical practitioner signs any such certificate he shall within one clear day after signing it send a copy of it to the Commissioners, and the Commissioners may visit the patient to whom the certificate refers.

I believe this clause with its three sections will meet all the requirements of the case for the insane of the upper and upper-middle classes, provided the Deputy Commissioners above named be appointed.

As several of the county and borough asylums are at the present time admitting private patients in large numbers, would it not be well that the voluntary boarder system appertaining to registered hospitals and private asylums should be extended to public asylums? There are many patients, incipient and border-line melancholic cases, who lack self-confidence, and who,

if they can place themselves under the sheltering wing of an institution giving them medical and general supervision, will rapidly regain their mental balance, and thus escape certification. Those who have had ample experience of the voluntary boarder consider the legislation regarding him has been productive of much benefit.

Having surveyed the subject in detail, we must now consider the various points, not already discussed, to which allusion was made by Sir William Gowers.

The contemplation from the train of the wall of Hanwell Asylum we are told prompted him to lead a crusade against the existing Lunacy Laws. He thought of those the wall excluded and those it included. Now the wall of Hanwell (the oldest of our London county asylums) is an anachronism! The asylums of to-day have no walls! and while the buildings include those committed to the humane and skilled care of the medical officers for treatment, they do not exclude those who desire to gain knowledge regarding mental diseases. The love-lorn Kentish cavalier, when he wrote in his prison in Westminster the lines, the first of which Sir William quotes, little thought they would be applied to an asylum for the insane some 250 years later on. Let us contemplate these lines.

" Stone walls do not a prison make,
Nor iron bars a cage;
Minds innocent and quiet take
That for a hermitage.
If I have freedom in my love,
And in my soul am free,
Angels alone that soar above
Enjoy such liberty."

We do not acknowledge the walls as part of our treatment to-day! Nor are iron bars necessary in institutions for the insane. They appear, as we have seen, to be only required for uncertified patients in single care! Our cavalier, although imprisoned, was happy withal in the freedom of his thoughts.

Sir William Gowers tells us that in many cases certification is harmful and unnecessary. Many of us differ from him upon this point.

We recognise in certification the means of placing the patient under proper control for treatment, and we are satisfied that the chances of recovery are, in many instances, greatly increased

thereby. The cases quoted by him as suitable for treatment without being duly certified were peculiarly unfortunate. They all had delusions of persecution, and these patients, as we alienists know, may at any time become actively homicidal or suicidal by impulse. They should certainly all have been under certificates, both in the interest of the public and of themselves. Sir William Gowers states that every patient received for payment and uncertified is a free agent—can leave or be removed at any time. Such is not my experience with uncertified insane patients in single care. Furthermore I do not admit that certification is in any way disastrous to the patient, or the painful distress to the friends it is stated to be.

Sir William speaks of the "divorce of psychological medicine from general medicine." There is no divorce! They have always been separate and distinct, and must remain so from the very nature of mental disease, and the treatment demanded. The moral side of this treatment is all-important, the medicinal only accessory, and that in quite a minor degree. The days of chemical restraint and of the exhibition of medicinal nostrums for insanity are past and gone. We have too many proofs of the value of our more enlightened system to wish to revert to them. Let the general body of our profession make themselves thoroughly acquainted with this system; they will then recognise the vital importance of the daily contact of the mental physician with his patient, to control the management and moral treatment of the case, the necessities of which are ever varying.

We are told that the "master of method" is necessary for the full and proper development of the normal mind of youth; that a scholar who has not had training as a schoolmaster is unequal to perfecting a student's education in classics, mathematics, or the higher sciences. How much more, then, must the "physician of method," trained by long experience and daily contact with the insane, be essential for the re-education of the abnormal mind, for the replacing of the unhinged mind upon its hinges, for the dispelling of the hypochondriacal delusions of the melancholiac, and for the calling back to mental life again of the *quasi*-demented patient in mental stupor! Speaking after thirty years' experience as a public asylum physician and thirteen as a lecturer on mental diseases, I would state unhesitatingly that to comprehend the vagaries of the mind diseased

to lead that errant mind back to health, and to recognise the means by which this end can be attained, are problems only to be solved by those who have made the insane their intimate and lifelong study.

Note appended February 7th.

Sir William Gowers has just published in pamphlet form his address of November 20th, 1902, with a Note. I observe the title is altered. It now reads, "An Address on the Prevention of Insanity." Would not "On the Evasion of Insanity" be more appropriate? In the Note he draws attention approvingly to Sir William Church's suggestion that notification should be to the local authority, the facts of each case to be subsequently investigated by the medical officer of health or some other official appointed by the local authority. What does the medical officer of health know of mental diseases? Is he qualified to decide such a case? And who is the other official suggested? Who but one skilled in the treatment of insanity is qualified to decide whether the conditions under which the patient is placed are such as are likely to promote recovery, or whether certification is necessary in his or her own interest? Sir William Gowers is in error when he states that provision is already made for the reception of border-line patients as voluntary inmates of public asylums. At present voluntary boarders cannot be taken in county or borough asylums, but only in registered hospitals and private asylums. He tells us, moreover, that it is a sarcasm to suggest that patients on the verge of mental derangement would place themselves in lunatic asylums. Is he not conversant with that large class of cases of incipient melancholia in which the patient lacks self-confidence and self-reliance, is imbued with a sense of impending trouble, and consequently eagerly seeks admission into a private asylum as a voluntary boarder, and expresses a feeling of relief when under the sheltering wing of the institution? The limitation Sir William Gowers takes objection to in connection with the clause for the treatment of incipient insanity, "that no person under this section shall receive more than one patient at the same time," is in accordance with the principle of the Lunacy Acts, 1890, 1891, that private asylums are to die out by gradual extinction, for no

new licence can be granted. To receive more than one patient would constitute a private asylum. Sir William Gowers objects also to the sanction of the justice of the peace being necessary, and adds that "such a sanction could only be a useless formality." He forgets that it is right that the liberty of the subject should be taken only by some mode of judicial procedure.

(¹) Read at the General Meeting, February 12th, 1903.

Lunacy and the Law.(¹) By T. OUTTERSON WOOD, M.D. Durh., F.R.C.P. Ed., M.R.C.P. Lond., Senior Physician, West End Hospital for Nervous Diseases, Welbeck Street, Cavendish Square, W.

IT augurs well for the success of the action taken by the Conjoint Committee of the British Medical Association and this Association with regard to the amendment of the Lunacy Law, to enable cases of recent (incipient) insanity to be legally treated in private care, without being certified as lunatics, that the Lord Chancellor inserted into his proposed Lunacy Bill a clause to meet our requirements, in the very terms I advocated at the annual meeting of the British Medical Association in 1896.

The importance of the subject must be my justification for bringing before this Association some features in connection with it from a practical point of view. I look upon the question for my present purpose as being divided into two sections only, for I intentionally leave the rate-aided class to be dealt with elsewhere.

Section 1st.—The proposal to extend the provisions of the present law so that incipient cases of mental disorder may legally, and without delay, be brought under skilled care and treatment without certification ; and

Section 2nd.—The suggestion that cases admittedly certifiable, or even already certified, may be placed in single care without the so-called stigma of certificates ; or if already admitted into an asylum, they may be taken out and placed

in the house of some relative or impecunious person, and kept there for profit, and not necessarily for cure—for it is not suggested that these patients may be curable.

Now, sir, with regard to the first section, which deals with cases of recent (incipient) insanity, I would divide them into two classes : (*a*) those who are amenable to reason and advice, who are absolutely uncertifiable, and who can to a great extent take care of themselves ; and (*b*) those recent cases of a mild type in which the mental warp is more pronounced, who may require removal from home, who are almost certifiable, or who may even have harmless delusions, who require a certain amount of moral restraint, and who may object to the control necessary for their proper treatment. With regard to Class A, no alteration of the law is necessary ; these patients are as capable of treatment outside the Lunacy Law as any ordinary medical case. I have to deal with a large number of them as out-patients at the hospital, and I have no difficulty whatever with them.

It is with regard to Class B that the law requires amendment, to enable us to obtain the legal control of the patient ; and a system of notification seems to me the best to meet the requirements of such cases. This, however, is no new idea. I have for years advocated a relaxation of the present law in order that incipient, doubtful, or undeveloped cases might, under suitable conditions, and at the earliest moment, be brought under that expert care and treatment which experienced alienist physicians know to be so necessary for the arrest of the disorder and the cure of the patient. Upon this point I am glad to think we are all agreed. It is the adoption of a principle that has worked well in Scotland for many years, and I know of no reason why, under proper conditions, and with the necessary safeguards of skilled supervision, it should not work equally well in England and Wales ; the order of a magistrate on this side of the border taking the place of the order of the sheriff, as in Scotland, for the legal detention of the patient for a definite period. There is, however, one point upon which we must insist, and it is that wherever these cases are so placed, whether it be in a doctor's house or not, they shall be at once notified to the Commissioners and be placed under their official supervision, as well as that of some skilled and independent local authority, appointed by the Lunacy Board.

Above all, we must be certain that it shall not be merely a matter of boarding them out in so-called medical homes or private houses, kept by unqualified, inexperienced, and untrained persons, but that we shall have some guarantee that they will be properly cared for and looked after by those who have been trained in some recognised institution for the insane, or whose competence is assured by long experience, and who shall be approved of by the Commissioners ; and further that they shall be nursed and attended, not by hospital nurses who have had no asylum training, but that their nurses shall be asylum trained, and preferably that they shall hold the certificate of the Medico-Psychological Association for proficiency in nursing and caring for those of unsound mind.

It is absurd to imagine for one moment that such cases as these can be properly treated by persons with no special knowledge of, or experience in, all the details of the moral control these persons require, and we must speak out with no uncertain voice in our condemnation of any attempt to minimise this, the most vital part of their treatment. The periodic visits of a consultant are practically useless as regards the supervision of these details, which are of daily, even hourly importance for the cure of the patient. This, of course, we cannot expect physicians, however eminent, to appreciate who have not made a special study of the care and treatment of mental disorders. It is the absence of this special knowledge on the part of the hospital physician which will permit him, on the one hand, to give these, the most difficult of all cases to manage, into the care of inexperienced people of limited means, or hospital nurses with no asylum training, who do not know what to do with them, who cannot understand the constant supervision and the unceasing vigilance they require, who are unable to anticipate a suicidal impulse or an outbreak of homicidal violence, and who will either rush in terror from the room at an outburst of excitement or will resort to the injudicious and unnecessary use of mechanical restraint ; or, on the other hand, to give them up to the tender mercies of the keeper of some medical home or nursing institution who has never seen the inside of an asylum, who does not hesitate to send out hospital-trained nurses to acute mental cases, and untrained domestic servants as trained mental nurses !

Gentlemen, I am speaking of things of which I have personal

knowledge, and in my opinion, instead of the law being made more elastic with regard to these transparent frauds, it should step in and compel every nursing home or institution receiving such cases as these to be placed under some official supervision. If this were done we should hear less of the fatalities which are of such frequent occurrence, and which help to fill the columns of the daily Press. While, therefore, we advocate the early treatment of cases of incipient insanity without certificates, let us endeavour to make sure it will be carried out in such an efficient manner that there shall be no excuse in future for the smuggling away of what are termed "borderland" cases, or those deliberate evasions of the law which have been alluded to, and even boasted of, before the members of this law-abiding Association, and which have in so many instances been followed by fatal results.

I will now turn to the second section of the subject,—I mean the suggested extension of this system of notification for incipient cases, so as to make it applicable to chronic certifiable cases of insanity and to those already certified and living in institutions for the insane. This, in my opinion, would be a dangerous innovation. It is sad to reflect that at this time of day we are compelled to reiterate the arguments of our predecessors in this Association against the unwisdom of such a retrograde step, and that the cruelties of mechanical restraint must again be brought forward to steady the minds of well-meaning but ill-informed philanthropists and bring into bold relief the danger of giving a free hand to those impecunious persons who bombard us with applications for the care of this class of patient. One of those individuals who was anxious to obtain the care of such an one endeavoured to impress upon me that blindness and being crippled would not matter. I presume if the unfortunate patient was blind he could not see and criticise his food and surroundings, and if crippled he could not escape, and would require less expensive supervision!

It has been suggested that the relatives of many certified patients should take them out of asylums because they are not dangerous to themselves or others, and that they could undertake the care of such cases as well or even better than they could be cared for in an asylum, without the "stigma" attaching to them of being certified lunatics. This, to my mind, is mere sentiment; nothing can alter the fact that the patients are

insane, whether they are certified or notified ; and whether the fastidious friends like it or not, the fact remains. My experience through a long series of years spent among the insane is that more downright cruelty and neglect are often inflicted upon such patients by friends and relations owing to their ignorance and incompetence, and through judgment giving way to feeling, than is possible under the splendidly humane treatment of such cases in our institutions for the insane, private as well as public, which are a credit and an honour to our country.

In support of this statement permit me to give you an account of a case which came under my notice a short time ago—a refined young lady of some twenty years of age, who, to save the “ stigma ” of certificates, was placed in charge of a hospital nurse in a so-called medical home, and who, because she was anxious to leave her room, had an ingenious waistband buckled round her to which was attached a half-inch rope sufficiently long to allow her to attend to the calls of nature. This rope was firmly fastened to the bedstead. The nurse explained to me that but for this contrivance she would not have been able to leave the patient alone ! Comment upon this case, which was one of certifiable insanity (and I certified her), but not dangerous to herself or others, is needless to members of this Association. Take another case, which I also certified and sent to an asylum—a young lady aged twenty-two years, who was kept in a private house to save certification, in charge of a hospital-trained nurse. She was in a state of acute mania ; she had bitten the hand of the untrained lady in whose home she was detained, because she endeavoured to hold her down by force. This hospital nurse had an untrained young woman as an assistant. The patient was curled up in bed, jabbering incoherent nonsense, her hair unkempt, and she was unwashed and dirty ; the room was barely furnished and most uncomfortable, and the window was strongly barred. As I was leaving the apartment I found each panel of the door, excepting the one below the lock, was protected by a stout half-inch deal screwed securely over it, and the door showed evidence of violence. On examining the door from the outside I found the panel under the lock was made to slide in a groove, with a knob on the outside to draw it backward and forward, and over the space left when the panel was withdrawn were three strong iron bars.

On inquiring of the nurse the use of this ingenious device, she informed me that it was to enable anyone sitting outside the room to see what the patient was doing inside!—a convincing confession of incompetence! I confess to being somewhat shocked at such a condition of things occurring in the closing months of 1902. But, gentlemen, these are the evasions of the law we must expect to increase and multiply if the law is made “more elastic” with regard to cases of certifiable insanity without adequate official supervision.

I do not wish to weary you with a recapitulation of further instances of the inhumanity of ignorance, which are only too well known to us; but I venture to say that, if the supervision of the certifiable insane in single care by the Commissioners is in any way relaxed, we shall soon have a recrudescence of those scandals which brought on to the Statute-book the Lunacy Law as it now stands. No perfunctory visitations of the physician can prevent them. Only within the last month I had three applicants for the post of nurse to a mental case, and in view of the question I have raised of asylum-trained nurses being so necessary for the care of mental cases, permit me to describe to you the kind of persons these three applicants were.

No. 1.—A lady, quite untrained, but with some years' experience in private cases, wonderfully self-confident, and largely possessed of the audacity of ignorance. When I asked her if she was trained she said, “Oh no!” she didn't believe in trained mental nurses; they only irritated the patients. When I asked her what she would do if the patient happened to become violent, she said, “I would look at her—that would be quite enough!”

No. 2.—Another lady, untrained, who, when I asked her what she would do if the patient became violent, said, “I would pull her arms back and tie them with a towel.” I mildly suggested that that might not be enough; then said this untrained lady, with a knowing look, “I would get a strap with hooks on it and hook them back!”

No. 3.—A tall, strongly built lady, very much satisfied with herself and her powers, who would take any case, male or female; she was a trained hospital nurse whose only knowledge of mental training was gained by three months in a county asylum some years ago, and a few months in the insane ward of a workhouse. When I asked her what she would do if the

patient became violent, she said very decidedly, "I am quite competent to do some '*policemaning*' if necessary!" I thank that lady for the word "*policemaning*;" it is so suggestive of truncheons and handcuffs, and such like trifles! It is these and such as these gentle, untrained, impecunious ladies into whose care the friends of patients are asked to deliver them. *Yet they all had testimonials from the friends and relations of former patients!* Then there is a further view of the subject, which the following incident illustrates, and it is a pretty example of another method of evading the law. A friend of mine, at the request of his patient's relatives, called a physician in consultation upon a mental case which required certification to legalise the necessary control. "Oh, you must not certify it," said the physician; "call it hysteria, and you can do what you like with it." "That is all very fine," said my friend indignantly, "but the woman is a lunatic and ought to be certified." "Call it hysteria," reiterated the physician, and away he went, leaving my friend to treat a case of acute mania as hysteria. But very soon the crockery ware began to fly about, and the "hysterical" patient had to be promptly certified and sent to an asylum. "Call it hysteria" indeed! We have arrived at a serious state of things if consultants, either unable or unwilling to recognise a case of acute mania, can bring themselves to call it "hysteria" in order that they may pander to the pride and prejudice of fastidious relatives who look upon this, one of the most affecting disorders that can afflict a fellow-creature, as a crime, or something to be ashamed of. Is it not rather the duty of a consultant to support the medical practitioner in his endeavour to induce the relatives of the sufferer to take a sane view of her malady, and do their best for her, rather than hand her over to such untrained and unreliable people as I have described, to be "policemaned" as a case of "hysteria"?

They who have spent their lives in endeavouring to ameliorate the condition of the insane must not stand by without protest and allow a reversion to those methods of barbarism which would be bound to follow any relaxation of the law, without something more to protect the unfortunate patients than the mere visits of a physician, who may have no special knowledge of the care and treatment they require. Above all, we must be satisfied that those who are allowed to take charge

of insane patients are properly trained and competent to do justice to their charge.

The point upon which the whole question hangs is that of adequate supervision. It is a very simple one. The Commissioners in Lunacy have all the facts in their possession. There is no need for any commission of inquiry about the lunacy laws. We know quite enough about them already. The appointment of Deputy Commissioners, together with local expert representatives of the Board in centres of the population, will, in my opinion, meet every requirement. By these means the vagaries of those who take charge of cases of doubtful or confirmed insanity will be held in check, and the friends and relatives will be controlled and guided by the firm but kindly supervision of trained experts, who are qualified by long experience to guide and direct them in the right way.

(¹) Read before a general meeting of the Medico-Psychological Association held at the County Asylum, Derby, February 12th, 1903.

Note on a New Case-book Form.(¹) By W. R. DAWSON, M.D., F.R.C.P.I., Medical Superintendent, Farnham House, Finglas; Examiner in Mental Diseases, University of Dublin.

THERE are two systems of recording cases in use in asylums. The first, dispensing with all but a very few headings, notes the facts in consecutive order, and their value or worthlessness depends entirely on the experience of the writer. The second (of which the method employed at the Murray Royal Asylum, Perth, is the most thoroughgoing example) seeks by numerous printed divisions to ensure that no fact of importance will be missed. Those who support the former urge that multiplication of headings encourages a mechanical and perfunctory manner of case-taking, that the resulting record is scrappy and disconnected, that intelligent amplification of salient features is sacrificed to the noting of many unimportant facts, and lastly that, as the divisions are never all filled in any individual case, the case-book presents an untidy and ill-kept appearance. It must be admitted that there is a good deal

of truth in these objections ; but, on the other hand, when we consider that asylum notes are often taken by inexperienced assistants, for whom some guide is essential, and that even those of larger experience are sometimes in danger of forgetting to record the isolated facts, the expediency of using some method of meeting these difficulties is obvious. The free use of headings certainly does this, while at the same time it enables facts of the history, often hard to elicit at first, to be entered in their proper sequence from time to time, according as they are discovered ; and lastly, headings greatly facilitate reference.

In the case-book form which I venture to bring under your notice I have endeavoured to secure the advantage to be derived from numerous headings, while at the same time avoiding, as far as possible, the drawbacks of this system. Thus an effort has been made, while omitting nothing of importance, to avoid excessive subdivision, and to allow a certain amount of scope for enlarging on individual points of importance. Proper connection and sequence is sought for by following, as far as possible, the chronological order of events in recording the history, and what Easterbrook would call the "natural" order in noting the symptoms ; while lastly, the printing and arrangement of the headings have been manipulated with a view to minimising the ugliness of blank spaces.

The points to which special attention may be drawn are the following :—

What may be called the administrative (in contradistinction to the medical) facts are placed in a division distinctly marked off from the rest of the notes, the name of the disease being also placed here for convenience. Next comes the family history, and then the personal history up to admission. Under the latter I take first the general facts regarding the patient as an individual, including such matters as sex, race, religion, occupation, age, disposition, habits, and so forth, for all of which this seems to me to be the right place ; then the previous health, under which previous mental attacks are first noted, and then nervous and other diseases, and, in the case of a woman, facts about menstruation and confinements. Lastly the present illness is dealt with, the only special point under this head being the arrangement by which certain symptoms of practical importance are conspicuously noted. (The space left for the

general account of the symptoms and course has been found scarcely sufficient, and I should now give up three or four more lines to it.)

In describing the "State on Admission" I have adopted substantially the order advocated by Easterbrook, though somewhat modifying the details. Thus we commence with certain general facts observable at once on seeing the patient, and such as cannot well be included under other heads (*e. g.*, weight and temperature). We then go on to those which are revealed by further external examination of the body, and finally take the internal systems one by one, beginning naturally with the nervous system as being of primary importance to the alienist ; and for this reason also this division is considerably elaborated, the facts being grouped, as will be seen, under the headings "mental," "sensory," "motor," and "reflex." (As regards the first of these subdivisions it may be stated that the notes under the first four sub-headings are intended to indicate not only the presence or absence of the symptoms named, but also, if present, their mode of manifestation, *i. e.*, the patient's appearance, words, and conduct.) It does not seem necessary to multiply headings in the case of the remaining systems (circulation, respiration, digestion, and the genito-urinary), which any qualified man should be accustomed to examine and write notes upon ; except, therefore, for one or two points having a special bearing on mental disease, only the leading heads are given, but space is left for the chief facts. Any matters of special importance can be enlarged upon on the following page, some mark being made under the appropriate heading to indicate that this is done. Treatment is also left for the next page, on which the progress of the case, etc., is noted.

It will be seen that, when the forms are bound up, two pages—blank except for the spaces to receive the patient's name, and the dates—are left for the remaining record. This is frequently sufficient, but in my own case-books I have had blank leaves with the same ruling bound in at the end of the book, the pages being numbered consecutively to those of the regular forms. The notes can then be continued on these, the page being entered separately in the index. From 100 to 200 forms, with a supply of blank pages, make an ordinary-sized case-book. Separate forms are convenient for taking

rough notes of the case on admission, to be subsequently written in and expanded; and of course any of the more elaborate systems of preliminary note-taking, such as Wilson's, may be worked in connection with the case-book.

The form has been in use at Farnham House for over sixteen months and answers well, though experience shows that one or two details might be improved, the most important being the increased space required for the history, as already mentioned. Of course some further modifications would be necessary to adapt it for public asylum purposes.

In conclusion I may say that, while drawing up the plan, I had the advantage of studying the case-book forms of several of the leading asylums of these kingdoms, the best features of which (or what seemed to me to be such) I have tried to incorporate in it; but I am most of all indebted to Easterbrook's instructive paper entitled, "A Plea for a more Natural and more Uniform Clinical Method," published some years ago in the *Edinburgh Hospital Reports*, to which I have already alluded.

HEADINGS OF THE CASE-BOOK FORM.⁽⁸⁾

NAME—DISEASE—Termination—Date of Admission—Hour—Date of Discharge (or death)—Last Residence—By whose authority sent—Medical Certificates: 1.—2.—Address of Nearest Relative—

FAMILY HISTORY. Heredity (direct or collateral) to Insanity, Nervous Disease, Alcohol—Phthisis, Rheumatism, Gout, etc.—**Longevity—**

PERSONAL HISTORY. General. Sex—Race—Religion—Occupation and Position—Age—Marriage—No. of Children (1) Alive—(2) Dead—Age of youngest Child—Miscarriages—**DISPOSITION and ABILITY—HABITS**, especially as to Work—Food—Alcohol—Sleep—Amusements—**Previous Health. PREVIOUS ATTACKS.** No.—Age on first—Kind, with Date, and Place of Treatment—**OTHER NERVOUS DISEASES OR SYMPTOMS**, Fits, Chorea, etc.—**OTHER DISEASES.** Syphilis—Rheumatism—Gout—Fevers, etc.—**MENSTRUATION—CONFINEMENTS.—Present Illness.** Duration—Supposed Cause—**TIME AND**

MODE OF ORIGIN.—SYMPTOMS AND COURSE. Epileptic?—Suicidal?—Dangerous?—Destructive?—Wet and Dirty?—Tendency to Wander?—Sleep—Appetite—Bowels—**TREATMENT—.**

STATE ON ADMISSION **General.** Height—Conformation—Fatness—Muscularity—Weight—Hair—Eyes—Expression and Complexion—Aspect and Apparent Age—Temperature—**Skin, Bones, Joints, etc.** Wounds, Bruises, Eruptions, Swellings, Fractures (especially of Ribs), etc.—**Nervous System.** **MENTAL.** Exaltation or Depression—Excitement or Stupor—Enfeeblement—Impulsiveness—Attention—Coherence—Response to Questions—Memory; Recent—Remote—Hallucinations—Delusions—Insane Habits, Propensities, etc.—**SENSORY.** Touch (including Muscular Sense, etc.)—Taste—Smell—Hearing—Sight—Field of Vision—**EYES.** External—Pupils—Fundus—**MOTOR.** Gait—Muscular Power—Paralysis—Co-ordination—Tongue—Speech—Handwriting—**REFLEX.** Knee-jerks—**Circulation.** Pulse—Blood-pressure—Heart—**BLOOD—Respiration.** Rate—Lungs, etc.—**Digestion.** Appetite and Thirst—Tongue—Teeth—Palate—Liver, etc.—**Genito-Urinary System.** **URINE.** Quantity—Reaction—S.G.—Colour—Deposit—Odour—Albumen—Blood—Sugar—Bile—Microscopic—.

TREATMENT AND PROGRESS.

(¹) Read at meeting of the Irish Division, May 23rd, 1902.—(²) Each page of the sheet measures about fifteen inches by ten inches. Page 1 is blank except for the head-line. All the headings except the last are printed on the two centre pages (2 and 3), the lines being ruled a quarter of an inch apart. To afford room enough for the history all the headings after and including "State on Admission" should be printed on the third page. All four pages have a space for the patient's name at the head. The space for "Medical Certificates: 1.— 2.—" is only intended for the names of the physicians signing them; their "Facts indicating Insanity" can be filled in *verbatim* under the history of the present illness, if desired. Sufficient space (two or three lines in some cases) is of course left after the various headings, but a feature of the form is that the headings are distributed over the page, and not simply printed in columns one under the other; the object being to minimise the unsightliness of any blank spaces. Between "Bowels" and "Treatment," on the second page, at least eleven or twelve lines should be left, as seven, the present number, has been found insufficient for recording course of case up to admission. Under "Genito-Urinary System" space is left after "Microscopic" for recording other symptoms connected with this system. "Treatment and Progress" is printed at the head of page 4 of the sheet. There are thus, as pointed out above, four pages, two with headings followed by two blank, for the record of each case.

Notes on Hallucinations. II. By CONOLLY NORMAN,
Richmond Asylum, Dublin.⁽¹⁾

WHEN last I discussed the question of hallucinations before the Academy of Medicine, I detailed an interesting case in which hallucinations of many of the senses occurred, and the auditory hallucinations were confined to one ear, which was deaf.

A similar state of affairs exists in another case, which presents certain further points of interest. Briefly summarised, it is as follows :—

CASE I.—Delusions of occult influence; thought-reading; utilisation of patient's faculties by others, etc. Hallucinations of various senses. Unilateral auditory hallucinations coinciding with unilateral deafness. Psycho-motor hallucinations involving the graphic centre.—M. N—, male æt. 32, single, has been a soldier. Admitted (from a workhouse) February 13th, 1900. Family history could not be ascertained.

On admission.—Patient gives this history of himself: He joined the Royal Field Artillery when twenty years of age. He remained in the service for over eight years, and served seven years in India. Had sunstroke three times. Since he came home he has had “an attack of malaria, with enlargement of the spleen.” He has recently been a fortnight in prison “for being drunk and swearing in the streets.” He was obliged to swear “on account of the annoyance in the ear.” “They keep talking to me and asking questions. They can read every thought that is in my head. I believe that this system of telegraphy, the system of communicating with one another, is at work in the Transvaal. The Boers have this power, and are able to read our despatches at a great distance.” He cannot say who it is that can read his thoughts, save that it is a man and a woman. He gets most annoyance from the man. He thinks that these people are out of “the Female Hypnotic School.”

Patient's appearance is healthy. His hepatic and splenic dulness are increased. His heart and lungs are healthy. (Had rheumatic fever four years ago.)

Patient is lame of right leg and has extensive scars about the knee. This is due, he says, to a gun-carriage falling on him some years ago.

February 20th, 1900.—Believes that he must have been hypnotised some time. “This fellow [he has no idea who he is] can always talk to me and hear what I am saying. He can always find me out. If I am reading a paper they can read it at the same time. It is said to be

some system of wireless telegraphy, but I think it is a trick. I'm certain it is human voices," etc.

February 24th, 1900.—Overheard to-day using extremely abusive and threatening language, directed at some individual whom he would beat and kick, and so on, and whom he repeatedly called, "You blackmailing b——." He said he was tormented by this person, who knew everything he thought and spoke it aloud to annoy him.

February 28th, 1900.—"They annoy me as much as ever. I know they belong to some society. They want to know why I don't join the Freemasons; and what would be the use, because they could tell every thought in my head. When I'm talking to a stranger they tell out my character. It is always in the right ear."

Patient is reported as frequently answering these voices in an angry tone.

March 13th, 1900.—Patient talks in a very confident way about his annoyances. "I won't get rid of them, because some one has got hold of my head and they won't let it go." He hears these voices both by day and night, when he is awake. "They are all kinds of voices; they can read every thought in my head. Whatever I am reading is read by them in a whisper beside me."

April 13th, 1900.—Patient is sometimes very noisy, answering the voices he hears. He says there is a conspiracy against him to try and get some money out of him. "They tell me to go to the Freemasons' School, and they would get money for saying that I was selling secrets."

May 13th, 1900.—Continues to complain about these voices that he hears in his right ear. "Even playing draughts they can tell the moves on the board." "If I take up a paper they can read it with me." These are a man's and a woman's voices, and they annoy him day and night. He very frequently stops working to shout out curses at the owners of these voices.

June 13th, 1900.—When his eyes were being examined he remarked, "I used to do that myself in the glass, and I saw people in my eyes looking at me; they can see everything I am doing and read the paper in my hand." "It is like ventriloquism." "It is by wireless telegraphy."

August 13th, 1900.—Says, "It's no use; I can't get rid of these voices at all. They are always questioning me, and telling me I am a bad character." "It is all this wireless telegraphy, and I have only to shut my eyes and shake my head and they can put some people in front of me, so that sometimes I can see two priests and sometimes other people. They are now deceiving me, and I don't know who they put in front of my eyes, as they change them so often." He produces a small piece of wood and says, "The centre of that there was a piece of glass taken from the eye of a sea-gull, and it has a map of the world on it," etc. On a later occasion he presented me with a piece of dark green glass, a fragment of a broken beer-bottle, I think, saying that by holding in a particular light he could see figures ("of the blind") moving about in it, and that thereby he knew what was going to happen (? delusional interpretation of simple light effects). Pupils = both a little eccentric: react to light. K. J.'s much +.

November 14th, 1900.—Patient talks about "a lot of blackmailers."

"Mind readers, they could read the book in your hand." "I hear their voices in my ears the whole time threatening to expose my character."

February 13th, 1901.—Says he still hears voices ringing in his ears, accusing him of various deeds, *viz.*, murder, etc. He says that he is being made the medium through which a conversation is carried on between two persons. Says he can see the figures depicted in his brain and eyes. Says the voices are due to being hypnotised when he was young.

March 15th, 1901.—Says that when he reads the newspaper or books blind people read his thoughts; thus the blind, who themselves cannot read, are enabled to read through him and through his mind. When he shuts his eyes he can see these people—that is, their images—in his brain, and he knows they are able to read his thoughts because they speak what he thinks, and they repeat aloud the things which he is reading.

August 13th, 1901.—He has had voices speaking in his right ear. They kept calling him by name and accusing him of murder. He hears voices speaking to him from above, which are in communication with people outside the wall.

February 13th, 1902.—He is noisy and excited at times. He hears voices telling him that he murdered Samuel Childs. When he shuts his eyes he can see all these people in his head.

January 6th, 1903.—Being questioned as to the relations with the blind (see entry of March 15th, 1901), he gives the following account of himself:—"When I shut my eyes the blind move my hand—my right hand—as if I was holding a pen, and so they make me write their thoughts." He exemplifies this by closing his eyes and moving his right hand along the table with the fingers in the attitude of holding a pen, but he says they do not make him actually write with a pen—he would not do that for them,—and that he feels the movements of his fingers and hand wherever his hand may be; when his hand is in his pocket, for example—or if his hand is under his head,—only his eyes must be shut. "In this way the blind can communicate with each other through me." "I see the blind in two ways—I see visions in my head and I see them spread over my body [this appears to mean superimposed upon him like an incubus], and I can also see them trying to photograph with a camera the objects in front of me. They cannot see unless what I see, but they try and photograph that." "Besides the blind, a man and a woman talk to me; sometimes, but not always, they talk indecently. Sometimes, being foreigners, they cannot understand the person who speaks silently to them from upstairs, and so they go on talking nonsense, thinking they are talking good English. This talk is mere abuse or nonsense, but not the gabble of idiots. I often hear, but cannot understand them." "They copy my thoughts and speak them over. If they move their tongue I feel it in my mouth." "The man that torments me has got hold of the dry plate of my photograph, and makes use of it to influence me and communicate with me." "The blind have a special sense more than we have—that is, their senses are more acute,—and so they know things that we cannot, and they call that thought-reading and wireless telegraphy, but it is not."

"They give me pains in various parts ; there is a knee-screwing machine and a hip-screwing machine." "They make me taste bodies that are in the ground ; sometimes I have been made smell very bad smells, but I don't want to speak of that, for I think that was an accident. Some of the poor blind creatures were short taken, and made a mess." "I feel them touching my fingers, and sometimes they change the feelings of the whole of my body to somebody else's." To the above account of writing the thoughts of the blind, he adds : "I know it is not I who am writing, because I do not know what they are going to write ; I only know it by the spelling of the words they make me write." With regard to the voices which he hears, he says that when they speak close to him low and confidentially they always speak only in the right ear, as if they were at his right shoulder ; but sometimes they speak from far away, from some distance in front of him or above him, and then he does not notice that they speak more in one ear than in another. He seems perfectly deaf in the right ear, a fact of which he is unconscious, and when the watch is placed to his right ear he says, "It is not going."

The well-known aurist, Dr. R. H. Woods, was so kind as to examine his hearing for me, and reported as follows :

"I examined the patient whom you sent me and find that his deafness is of the middle ear catarrhal variety, associated with Eustachian obstruction. In the right ear he has lost his hearing for a watch ; in the left his hearing distance is $\frac{4}{36}$ of normal. In the right ear Rinne's test is — 10, whereas it ought to be + 25 ; in the left ear it is + 5. The drums are slightly retracted, particularly the right. I was able, with a little persuasion, to pass a Eustachian catheter on the right side and verify the diagnosis of Eustachian obstruction. The right ear is the one in which he complains of 'voices,' and it is in the right ear one would expect trouble from tinnitus. Whether this complaint is his translation of auditory irritation that ordinary people would call noise or not, I am unable to say—probably you will be able to judge. As far as the objective condition of his ear is concerned, the case is a common-place one."

In this case we have, with very exquisite delusions of occult influence, hallucinations of various senses—visual, tactile, general sensibility, olfactory, and auditory. Of all these the last alone appear to be unilateral. The distinction that the patient makes between voices near and distant is interesting, as his hallucinatory state is quite analogous to the ordinary condition of a person who is deaf of one ear and does not distinguish the fact with regard to distant noises, but observes it when the noises are near.

I do not propose at present to add anything to what I said in an earlier paper on the question of unilateral hallucination, nor on the subject of auditory hallucinations in the deaf, save to refer as regards the latter to an interesting case recorded by that very keen and able observer, Professor Pick, of Prague. (I quote from an article by Séglas in a recent number of the *Annales Médico-Psychologiques* on "Unilateral Hallucinations.") Pick tells of a chronic patient who was *deaf of the left ear*, and who suffered from auditory hallucinations of the *right side*. A plug of wax was found blocking up the left ear; this was removed, and from that time *the hallucinations became bilateral*. This case seems to indicate that unilateral auditory hallucinations associated with unilateral deafness are not in all cases susceptible of the explanation which most readily offers itself—namely, that some peripheral or nerve-trunk irritation occurring in the deaf ear is interpreted in a delusional manner.

It is to be noted that the mystic influences in this case have a close resemblance to the sufferings of the victims of witchcraft in olden times. The mystic glass also is interesting, and is, perhaps, a reversion to a common idea, or may be due to something that he has heard of the magic mirror of the East. Using him as a medium, obtaining influence over him by hypnotism, etc., recall the notions of both modern and ancient superstitions. Getting control over him by obtaining possession of the dry plate of his photograph, though quite contemporary in form, is, in essence, the old notion of witchcraft, according to which the witch had only power over a person by obtaining some portion of their body—hair, nails, or the like.

But the chief point of interest in this case arises in connection with the existence of psycho-motor hallucinations. "If they move their tongue I feel it in my mouth." In other words, the patient receives ideas not in the way our hallucinated patients usually do, by the direct auditory centre, but through the speech centre. This is the commonest form of psycho-motor hallucination. Less common, and in this case more remarkable, is the psycho-motor hallucination connected with the graphic centre. Though his hand be perfectly still he feels movements as if he were writing, and he recognises the words written by the movements which he feels himself making in forming the letters. It is curious to note that this only occurs when the eyes are closed. I am not yet prepared

to say exactly why this should be, but it appears to exclude very perfectly the action of the visual centre. He does not see his fingers moving or the letters which they form. It appears to be entirely a matter of sensation of the trained movements used to express ideas by writing. Therefore, if we accept Tamburini's theory of hallucination, we must believe that we have here to deal with an irritation occurring in the graphic centre.

In the three cases which follow, the patients describe "voices" which they hear or feel in their mouth or throat or chest, but which, whether their own voices or the voices of others, do not come to their cognizance through their ears in the ordinary way of hearing. These appear to be pure cases of psychomotor verbal hallucination. In Case 2 it will be observed that there are two voices, one of which the patient hears seemingly in the ordinary way, while the other is felt rather than heard, and is her own. In Case 3 voices are heard in the throat and chest. They are the voices of others speaking through the patient. In Case 4 telephones speak to the patient from her voice inside, and also she is compelled to repeat in her mind the blasphemous and indecent words she hears. There is a vague notion of double voice here, questioning and answering.

CASE 2.—*Hypochondriacal delusions. Occult influences, electricity, etc. Auditory hallucinations. Double voice. Psychomotor hallucination relating to the action of the vocal organs.*

B. C—, female æt. 60, widow, small shopkeeper; religion, Roman Catholic. No hereditary history of mental disease. Said to have been healthy up to the oncome of present illness. Being a dressmaker most of her life, she was of sedentary habits. Financial circumstances were so straitened as to give rise to anxiety. Patient's only son, in whom her daughter states "she centred all her affection," died three years ago. Some six months later her mother died after a long illness. Patient then became "melancholy and religious." Then she began to think everyone was looking at her in the street, and that certain people made her unconscious and took out her heart.

Admitted December 8th, 1902.—On admission thin, with rather haggard countenance. Expression somewhat anxious, vigilant rather than depressed. Loud first-sound murmur, most audible at the apex. Arteries tortuous and rigid. Urine free from albumen. She is a gentlemanly person, somewhat timid and suspicious, but tractable. Converses with some intelligence on general subjects, and is capable of

talking for some time without displaying delusion. When medical officer began to examine her chest, patient said she heard a friend's voice saying that such was not to be done. When she eats, her food goes up her back. People draw it up out of her stomach. There is "a split in her head." Hears two voices "in her head" answering one another. One is like her own voice.

December 9th, 1902.—Hears a voice abusing and using indecent language, and then she hears her own voice using pleasant language, such as "God bless you." A voice told her that it was through a slit in her head she hears, but she cannot feel any slit. When going into church one day she was struck across the chest with electricity; she does not know by whom. People in the street used to speak of her as she passed, and "voices" in church used to say to her, "Go to Communion," "Go to Father So-and-so," and the like.

December 15th, 1902.—Inclined to deny the voices at first; then describes them as before. The voice which replies to the abusive voice is her own voice. Besides the voices, she speaks of "brine," which is a sort of tingling pain that runs down to her feet and toes. Suffers also from what seems to be an abdominal sensation, which she calls "crickets"—(possibly delusional interpretation of the feelings produced by a dilated heart palpitating in the epigastrium).

December 22nd, 1902.—The abusive voice is often indecent, accusing her of being about to have children by a priest, and the like. Then a voice, apparently her own, replies. The tingling pain is better; it was electricity. She says she called it "brine," because it gave her the sensation of being pickled.

January 8th, 1903.—Has had fainting fits. Heart's action very irregular. Notes under these dates exhibit no change in mental phenomena, except that she grows less inclined to talk of her hallucinations.

February 8th, 1903.—Talks of the voices as "delusions," and says she is "cured." But says they *were* real. When at Communion she used to hear them say "Your son is coming home," and the like. The "electricity" which she *used* to feel on her skin was a feeling of "softness"—a "creamy" feeling. She is restless and uneasy, always importuning to be sent home.

March 3rd, 1903.—Hears the voice of one of my colleagues constantly at night, telling her she will soon be going home. Thus she heard him tell her last night that she would go away to-day, and she consequently expects to go. The voices are conveyed by "a fluid."

March 6th, 1903.—She talks spontaneously and by preference of nothing except of getting home, repeating this topic over and over again with a monotony resembling that of the melancholic. Questioned steadily, however, she admits that she still at times hears abuse and indecency; then hears her own voice saying prayers and blessing her, and telling her not to mind. "It is the voice of God, for it is always good, but it comes like my own voice, speaking so that I can hear it. *You* could not hear it, for I do not speak, but *I* hear it and feel it. The answer to the cursing comes to me in my own voice, and when I feel it I at once know that God is supporting me against the cursing." She added, returning to her favourite topic, "I don't hear anything now except Dr. Cullinan telling me I shall go home."

CASE 3.—*Neurasthenia. Hypochondriacal delusions. Psychomotor hallucinations relating to the action of the vocal organs.*

C. D—, female æt. 36, single, artisan class. No hereditary taint ascertained. She is stated to have had “water on the brain” when she was ten years old. This affection was characterised by stupor and delirium. She was always afterwards “delicate and nervous,” restless, and inclined to roam about in an aimless way. She was observed to have a peculiar habit of staring at her hands, probably associated with some hypochondriacal ideas. It is impossible to determine when the present attack began; it appears to be merely an exaggeration of her habitual condition. Medical certificate states that she thinks her body is dried up, and that she hears voices in her head.

Admitted August 29th, 1901.—On admission she was emaciated and pale, with fixed fretful expression. Though she looked very frail no definite signs of physical disease could be discovered, save an impairment of percussion over apex of right lung. She was fretful and somewhat resistive; resents examination. “It is the soul that is the matter. I am a case for a priest.” Will not say that her soul is lost, but she has “saved it by prayer; it was at one time a beautiful soul.” “I heard beautiful voices of saints in myself.” Saw the Holy Ghost, but was asleep then. Her “body is drying up,” and she has “lost her inside.”

August 30th, 1903.—Complains (untruly) that she was blistered yesterday in a bath too hot and containing mustard. Vague hypochondriacal complaints. “Was a beautiful-bodied girl when I came here; had a beautiful body and beautiful limbs; now my heart is destroyed and every bit of me; my skin is changed.” She heard beautiful voices of saints coming from her own throat. She was emphatic that she did not hear these voices in her ears, but in her throat (here she put her hand on the epigastrium). She went on: “The voices were voices of saints and lady nuns, sometimes of countrywomen.” They come specially when she is praying, but also at other times. They are as if it is she who speaks, but the voice is not hers. She recognises several voices quite different from her own.

September 5th, 1901.—Attributes her thin and fragile condition to the cleansing bath she received on admission. Says she was as beautiful as a statue till then; had a beautiful bust, etc. Used to sing like her friends, but she means “the saints” by “her friends.”

September 12th, 1901.—“Body wasted; bowels closed; growing smaller and drying up,” etc. By the gift of God she spoke with the voice of a nun whom she knew, etc.

September 19th, 1901.—Small causes, such as physical examination, visits of parents, etc., produce much agitation, during which she speaks more freely than at other times of her delusions. “Beautiful body is quite spent,” etc. Hears voices which she describes as heard “in my throat and in my chest.” She has rather improved in physical condition, and it is now noted that the lungs are clear.

September 28th, 1901.—Hears other people’s voices speaking through her. If saying her prayers hears another person’s voice saying them for her.

October 14th, 1901.—“I used to imagine that I spoke like saints and nuns. I used to hear their voices in my throat and chest.”

October 29th, 1901.—She hears a lady's voice in her chest, sometimes when she herself is speaking, sometimes when she is not speaking. Generally dull and very inaccurate about dates.

Notes made in November and December, 1901, show indications of catarrhal trouble in the lungs. Under treatment by cod-liver oil, etc., this cleared off, and in January, 1902, she had begun to gain flesh. During this time she remained dull and hypochondriacal, and sometimes spoke of her voices as "imaginary," "perhaps fancy," and so on, and sometimes as being quite real. Hears them in the chest and throat.

May 29th, 1902.—It is noted that she does not know where she is living. The old hypochondriacal notions continue. She employs herself in the workroom, sewing, etc. Usually speaks of her hallucinations as of things past.

August 29th, 1902.—"Used to hear voices," but does not now. Tells of them as real, but if pressed will say, "They may be imaginary." Dull and self-absorbed. Is almost always praying, but employs herself at needlework.

March 6th, 1903.—Though rather self-absorbed, speaks freely when questioned about her "voices." "They are the voices of saints and holy people. They come in my throat, not in my ears; it is like as if I was speaking, but I am not speaking, and the voices are not mine."

CASE 4.—*Persecutory delusions. Impulse to suicide. Auditory hallucinations. Psycho-motor hallucinations relating to the action of the vocal organs.*

D. E—, female æt. 36, married, servant class. No satisfactory family history obtainable. Her first child was born about four months before admission (natural labour so far as is known), and since then she has been ill. Is said to have suffered from hallucinations, visual and auditory, and to have attempted about six weeks before to drown herself and her infant.

On admission, March 27th, 1902.—Fairly nourished, pale, pupils wide and sluggish. She has a fixed and somewhat anxious expression, suggestive of listening. Says that she was told by telephone that her husband is not her husband, but her brother. She says things pass from the ceiling to the floor, but this was electricity. Did not try to drown herself and her child, but only thought of it.

March 28th, 1902.—Little sleep, "owing to my mind; I had suicide and everything in my head." Also heard a "clicking" in her ears. Often hears a voice like the telephone "humbugging me with a lot of questions."

April 2nd, 1902.—Preoccupied, restless, quarrelsome. Sounds at night like someone speaking through a telephone, saying indifferent things with some application to patient.

April 10th, 1902.—Hears the telephones constantly—not in her ears, but in her throat or mouth. The language is mostly abusive and vile. While my assistant, Dr. Cullinan, was questioning her she paused to listen to such voices, and repeated to him what they said. Afterwards

she said to me, "The telephones speak to me from my voice inside" (laying her hand on her chest). "It is like my own voice; it is some one speaking with my voice. I hear it in my mouth." While I spoke to her she assumed a listening attitude, and her lips moved a little. Questioned, she said she had then heard the voice; it said, "Why don't you marry the man that took the teeth out of your head?" I remarked to her that her lips had moved, and asked her whether she had not been merely talking to herself. She said, "No, some one moved my lips."

April 27th, 1902.—"There are some questions answering to me." "Cursing and bad language." They are tormenting and putting questions into her head. She gives it to be understood that indecent and blasphemous words are suggested to her, and that she is compelled to repeat them in her mind.

May 27th, 1902.—The telephone continues to talk to her, but she has "put down" the bad talk. No more dirty words and curses. Indifferent references to her past life and surroundings.

June 27th, 1902.—Complains that she is pulled by the head at night to make her shaky, etc.

July 27th, 1902.—Quite astray as to dates; dull and sluggish; volunteers little information. A voice tells her her mother is here.

September 27th, 1902.—Does not yet know the names of the medical and other officers of the asylum. While an A.M.O. was examining her to-day, patient quite irrelevantly said, "Bloody hell." Asked why she said this, replied that someone answered her back.

December 27th, 1902.—Tranquil and works a little, but does not gain intelligence. Does not know where she is, nor the names of those around. Says she does not hear voices now, but used to hear a voice calling—a far-away voice.

March 6th, 1903.—"The telephones speak in my mouth. I do not hear them in my ear, but they talk with my voice in my mouth."

In none of the following cases are the descriptions given by the patients quite so exact as in the above, yet in all a condition exists which I think is identical with the former cases.

CASE 5.—System of persecution. Neologisms. Mystic influence. Mental action interfered with. Impulses to suicide and murder. Psycho-motor verbal hallucinations.

Male æt. 27, single, a post-office employé. Father was a patient in the Richmond Asylum, Dublin, where the present patient was admitted July 26th, 1902. He then presented a highly-organised system of delusion. Was the victim of persecutors, who were an American gang of "sporsers," "spookers," or "worsters." They play upon him by means of an "ether connection." They reproduce scenes on the brain like a cinematograph.

On August 2nd, 1902, he is tormented by electrical instruments called "tykes" and "spankers," the action of which is similar to that of "the corps of wireless telegraphy."

August 26th, 1902.—His sleep is disturbed; does not get proper sleep; it is like a stupor or torpor. This comes from the “spooking business.” During the two following months the notes indicate hallucinations of hearing and vision.

November 26th, 1902.—“I am an automatic lunatic; I can sing, dance, or do anything through the wires that are acting on me.” “They can address me by the mouth; they can make me speak by forcing the tongue.”

January 5th, 1903.—He tells of an attempt at suicide (truly) made some time before his admission: “I felt strange, as if some person had made me subservient to his will-power and urged me to do things I did not want to do; this, I believe, is known as mental telepathy. I was tormented by means of a voice, the owner of which can remain at a distance and hold up his victim to contempt. One day I was much tormented, and an impulse which I could not resist came upon me, when I was in my brother's workshop, to lift up his shoemaker's knife and draw it across my throat. The cut was slight, but I and my mother and brothers and sisters were all terribly frightened. More than once terrifying impulses seized me to take a hammer and knock out my brother's brains. Once I took the hammer up, but I dropped it and ran away. Afterwards my relatives were in collusion with my phantom persecutors. I suspect also a man called R—; he is a master of wireless telegraphy. Thus while a race is being run at Aintree he reproduces it by wireless telegraphy in a theatre in Liverpool. It is a system of personation. They frustrate my intellect; they worry and confuse the mind; they rush the intellect. They are called ‘shrivers.’ They can reproduce the incidents of your life as clearly in your sleep as if you were awake. They work on the mind and make one a mere automaton. From creeping melancholy to the distorted maniac they can reproduce every form of lunacy. They use my mouth to articulate their words. They make me say words I don't want to say—smutty words, for instance,—and they make me sing silly popular songs.”

January 26th, 1903.—Said to my colleague, Dr. O'Reilly, “They can talk to you through my mouth.” Asked to demonstrate this, he shouted, “Will you give over?” (cease), and answered loudly to himself, “No.” Said he could not prevent the answer that he was compelled to give; it was not he who spoke, but his phantom persecutors through his mouth. He is an industrious person, and intelligent in various handicrafts, painting. Good-humoured when addressed. When alone he is liable to loudly and angrily revile his persecutors, but he has never been heard indulging in the automatic talking and singing of which he complains.

CASE 6 is a case which can only be abstracted here, as it is too voluminous to be detailed. A married man, now aged about 60, formerly a butler and of intemperate habits, has been under observation four and a half years. He suffers from paranoia persecutoria, with well-marked hallucinations of perhaps every sense save that of mental action. His thoughts are not compelled, but he is tormented in every other way. Hallucinations of general sensibility, dolorific, and of the muscular sense; true tactile hallucinations; thermal; hygric (hallucinatory sensa-

tions of moisture) ; visceral ; genital ; olfactory ; true gustatory ; visual (elementary and common) ; respiratory ; auditory (elementary, common, and verbal). In May, 1899, he spoke of a voice that was sometimes puffed into his mouth by the same agency that puffs smells into him, and that acts upon his breath, but he hears it in his ears. He was satisfied that it was not his own voice, because "it goes into me, whereas my own voice comes out of me." In April, 1900, he said, "By day I hear the voices through my ears the way I hear you speak ; by night they are mostly working on the breath, going in and out of the mouth."

We seem to have here a not very fully developed condition of psycho-motor verbal hallucination. The case is interesting as showing very extensive engagement of sensation. The somewhat rare hygric hallucinations are well marked (sensations of being wetted, drenched with water, etc.). This form of hallucination was first described by Baillarger. Ramadier, in describing some cases, attributed it to a special form of sensibility (sense of moisture). Tambroni is disposed to think that what he has entitled the hygric sensibility may even be localised in the convolution of the hippocampus. Ravenna and Montagnini, in a careful study of the subject (*Riv. di Pat. nerv. e ment.*, Sept., 1902), give a guarded support to Tambroni's view. We also note in this case the occurrence of respiratory hallucinations, by which name I propose to designate those sensations of suffocation, interference with the breathing, etc., which are so common. It would probably be correct to consider these also as psycho-motor hallucinations. Perhaps the same may be said of the minor conditions of hallucination of the muscular sense, in which a patient complains, as occurs in this particular case, of sensations of lassitude in special muscular groups, feeling as if his limbs were too heavy to move, etc. It is so, certainly, as Ségla has pointed out, with regard to hallucinations as to movements of the limbs ; and that author has dealt, in the same connection, with the very interesting hallucinations which occur in persons who have lost a limb by amputation and are able not merely to feel pains in the extremity which has been removed, but also to experience sensations as though lost members were being flexed, extended, supinated, pronated, etc.

Ségla has suggested, no doubt justly, that hallucinations of the muscular sense may have brought about beliefs in transportations by witches, rides on broom-handles, etc. A case occurred in my clinic last year in which an elderly male drunkard suffered from hallucinations of vision (blue lights flashed upon

him) and a sense of being transported through space at night. He felt himself lifted up, bed and all, and carried to and fro through the air, and then brought back again. With these hallucinations, delusions that "electrical parties" were working against him. Made apparently good recovery in about three months.

In another recent case a woman æt. 36, who had been drinking, suffered from dysnoia, confusion, loss of orientation, transient delusions, now exalted, now depressive, auditory visual and visceral hallucinations, and entertained beliefs that her voice was changed, and that she was carried from place to place. The last was for a time her most prominent complaint. Thought the transport was effected by an electric machine. She recovered in about six weeks' time.

In another case, which I saw through the kindness of my friend Dr. Molony, who was then Physician to Swift's Asylum, a lady was subjected to a very terrible form of torture. As soon as she fell asleep she was removed to the Zoological Gardens and handed over to the various animals, who outraged her all night. Though this was said to have occurred in sleep, it was evident from the distress and terror which she exhibited that the sensations experienced were very real, and the sensation of being transported was as distinct as the specific sexual sensations. Subsequently, as I learnt from Dr. Molony, this poor lady, after an illness of twelve years' duration, made a good recovery.

Returning to Case 6, we have here to note another feature—namely, an interesting form of association of hallucinations. "My mind is tortured by a voice, and at the same time my body is tortured with the practice upon it of pains and darts; the practice does not come without the torturing voices, nor the voices without the torturing practice."

CASE 7.—A married man æt. 38, engineer, of intemperate habits, and having a bad family history, exhibited at first what appears to have resembled ordinary dysnoia, then developed delusions of jealousy, and then, forgetting these, a system of persecution. Has been under treatment for four years, and while he retains to the full his ideas of persecution he has gradually arrived by the way of martyrdom at the belief that he is the chief teacher of Jesus Christ and the Paraclete, and that all the world is "in simile" with him, and so on. He has been tortured by electricity, and, as he himself says, all his senses are tampered with. He has, by the way, true gustatory hallucinations (sweet and acid tastes) confined to the back of the tongue.

May, 1899.—His “thoughts are anticipated and his mind known before he speaks at all;” his “eyes are made looking-glasses for others;” further says, “I am employed as a telephone. It is something within me that is connected.” Talks of “a communication like a voice—something speaking to me in my mouth and throat. The word comes from my throat; it is not formed in my brain; it is formed by some superior power, either your will-power or electricity.”

August, 1899.—“All my thoughts are spoken by my tongue-soul to every person in the world. My soul is in touch with all the souls in the world—even silent thought.” He also talks in a not very intelligible way of his “picture thoughts.”

CASE 8.—*Delusions of persecution with tendency towards ambition. Hallucinations of general sensibility—visceral, olfactory, genital, visual, auditory, double voice, not very prominent psycho-motor verbal hallucinations. Mystic influence. Tendency to neologism, etc.*

E. F.—, female æt. 53, widow, tailoress, Roman Catholic. An aunt is stated to have been insane, and patient says that a sister was epileptic. Patient married many years ago a man much older than herself. The marriage was childless. Husband died five years later. After a few years she had an illegitimate child, who died at birth. Since that event she lived a virtuous and industrious life (now for many years). She is said to have been temperate. Her present illness is said to have been of one and a half years' duration.

Admitted May 23rd, 1894. She then presented numerous hallucinations and delusions. She was the subject of mysterious attacks and persecutions, which had caused her to frequently change her lodgings and go from place to place (*persecutée d'éménagement* of Ball). “Voices” at night. “Darts” of pain, more or less everywhere, but particularly about the genitalia. Sensations of tightening, of dilatation of the vagina, and specific sexual sensations. “Visions,” sometimes of the machine over the ceiling, that works all this mischief, sometimes of abominable and impure objects. As is so often the case, she says, “I do not see these things; I am made to have a vision of them.” Snuff and soot are put in tea; the food that is given is rotten. Frightful smells, apparently faecal, disturb her. Dust is blown into her room and nearly stifled her. Her abdominal viscera are dragged down and are tightened. Incontinence of urine is occasionally produced. She was forced to laugh, and forced to cry, and forced to do things. When she tried to read, some one would read with her. People assumed her form for improper purposes. They talked evil of her through the city, and made her friends to shun her. They put things against her character into the public Press. The voices were described as having a peculiar character. They were “drumming” voices. A “drumming” voice is produced by speaking with the lips closed and the teeth open. The person drummed to can hear the voice, and others cannot. The voices thus heard were some friendly, some hostile, and maintained an attack and defence, some vilifying patient, others saying it was a shame to torment

so excellent a woman in that horrible way. Further notes of this case are very long and detailed, and it will be impossible to more than indicate the most interesting points. In February, 1895, she stated that she was born for a high position, to which she has never attained, and that she knew she was humbled (by her torments) in order finally to be exalted to her proper sphere. This seems to be an example of the not uncommon building up in a pseudo-logical way of exalted delusion on a foundation of persecutory. The case, however, is not one of Magnan's *délire chronique*, for the persecutory notions still subsist, while the ambitious ideas have not increased and are rarely referred to. She continues much in same condition for the past eight years. Sometimes one particular phase of persecution is more complained of than another, but there is no real change. Asked (May, 1899) whether she heard voices anywhere except in her ears, she laughed and replied, "How can one hear but with one's ears?" and immediately added, without further suggestion, "But they use my throat as a telephone to speak their own voices through." One has been careful since then to avoid suggestion of any kind, but she occasionally refers among her other complaints to the telephone voice inside.

CASE 9.—*Paranoia persecutoria. Mystic influence. Neologism. Hallucination of the sense of mental action. Compulsory whispering of thoughts. Subjective sense of compulsory talk (coprolalia, etc.).*

A. B—, female æt. 23, single, of farming class; religion, Roman Catholic. No hereditary history of insanity. Patient had convulsions when about two years old; otherwise she is said to have been healthy and normal up to March, 1902. At that time she is said to have begun complaining that people talked to her through the walls. Her brother observes that "she became very crafty and deceptive" (*i. e.* suspicious). Admitted October 30th, 1902.

On admission, a well-developed and well-nourished young woman, presenting no physical peculiarity save that she is somewhat pallid. Self-satisfied, precise in manner, and very disputatious. Though good-humoured enough, she does not readily reply to questions, as she prefers to interrogate her questioner, demanding to know what she suffers from, how her mind is affected, and so forth. Says she has slept little of late, being annoyed by "voices" coming through the walls from the next house. She was also annoyed by the bishop and clergy; they sat and willed that she should come to Confession; this did not influence her, but it annoyed her.

October 31st, 1902.—Says "the actions and attitudes" of the young men in the next house used to annoy her. They had a sort of "pantomime" which she cannot more particularly describe; each had a "rôle;" they "syllable-ised" their words, and made a smacking of the lips. Her own family were cognizant of this annoyance, as she heard a laugh from the next house which she recognised as being her sister's laugh. Also heard a voice from the next house threatening death to her soul if she did not stand up for it, etc. Could not remain in the

church after the priest had come in, because she had no control over her talk, and everything that was said or whispered she was obliged to repeat; a weight came over her chest, and she had to repeat all she heard. Thinks the priests have some hand in this.

November 6th, 1902.—“No control over my talk. Have to repeat what I hear other people say. This is distressing, for they often say bad things. There is ecclesiastical influence in it.”

November 13th, 1902.—“Better. The ‘reserve’ part of the talking is better. Have more control.” Still she says she has to repeat the indecent things that were said to her through the wall at home.

November 13th, 1902.—“The other patients repeat at night everything I say during the night.”

December 15th, 1902.—To the writer she said, “I am weakened by influence. It must be ecclesiastical influence. In some respects my thoughts are hindered. The free use of my thought is hindered. I am compelled to speak in childish language, and my speech” (contents of) “is influenced; besides, I have no guard on my talk. I do not know what does it. It is mysterious; there is ‘that other matter.’” (Refuses to explain this last phrase; it seems to mean something besides priestly influence and the influence of young men.) “They speak, and then I *have* to repeat, and sometimes to reply.” Speaks somewhat vaguely of a gramophone.

December 30th, 1902.—“The train of my thoughts is destroyed. I can’t think without whispering the words.” Still hears the voices of people at her home. As her home is fifty miles away she accounts for this by means of the gramophone.

January 30th, 1903.—“I was under priestly penance; they wanted to get my mind weakened, but could not get a thorough hold on it. They got students to talk some kind of pantomime; sometimes I hear it now, but it may be the patients here.”

February 28th, 1903.—The ideas are becoming more grotesque. Says she is “worked on by theology and medicine,” and “suffered from penance in a sense intermixed with medicine.” Her muscles have been deformed since she came here. Her limbs require no renovation, and they have been utterly deformed. Her body is lying in state, and any deformities practised upon it (apparently by the medical staff) are entirely illegal.

Throughout she has remained tidy and smart, rather pert and saucy, extremely suspicious, able to work at needlework, etc., though apt to be lazy and self-absorbed if left to herself. She never indulges in objectionable language. Sometimes she has been heard talking to herself, but the contents of her conversation cannot be known, as she at once becomes silent when she is observed.

In many cases, as Ségla has pointed out, the accounts which the patients give of themselves are so incoherent and unintelligent that the mode of hallucination is rather obscure, and yet we have strong grounds for thinking that it is truly psycho-motor. That seems exemplified by the following cases :

CASE 10.—A male, labourer, æt. 39, married, father of eight children. Used to drink hard; said to be sober for some years. Some two years ill when admitted on February 13th, 1901. At first, voices, at curiously varying distances, repeating to him everything that was in his mind and making a toy (*i.e.* puppet) of him. Later on he complained of inward dread, caused by the voices assuring him that the whole place was about to be destroyed. Then he announced that he is filled with the Spirit of God and is the greatest prophet since Jesus Christ; has foretold various historical events, etc. Again, the exalted ideas recede and he is persecuted—"I suffer pains for others; I have none of my own." Hears voices of girls, who use dirty language; has a heavy pressure on his body; is "tormented by a system of suckage." In July, 1902, he said to me, "It is caused by 'cheefening changes;' my mind is full of visions; voices roll up from my stomach and nearly choke me; I pronounce with my tongue, but they come so quickly I can scarcely articulate them and have not time to understand them as they come out; they roll like balls out of me."

CASE 11.—Male, single, æt. 35. He is called a labourer, but he has been some ten times in jail, as well as twice in asylums, and may be probably classed as an habitual criminal. For the last eight years he has, he says, been tormented with voices. He was admitted to the asylum from prison in July, 1900, and apparently prison discipline and abstinence, following upon extreme alcoholic excess, caused the aggravation of an habitual state. His symptoms briefly were, on admission, voices, flashes of light, blows on the head, bangs on the heart. He complained also that the minds of others went out of them and were communicated to him. There was an instrument over his head to which he attributed the execution of all these annoyances.

In January, 1901, things had got rather worse. His head was twisted at night by electricity. Sometimes he saw his persecutors in the air "like a picture, but when I look again they are gone." At that time he stuffed his nose at night to procure sleep, for "the electric affair comes down through my nostrils."

A year later he gave a fuller explanation in these words:—"There used to be a very strange thing coming down through my nostrils; it was like a false breathing; it was turned into a voice, and I was supposed to take a meaning out of it; sometimes it was calling names—'blackguard,' 'son of a w—,' and the like; sometimes prayers; sometimes (according to the humour of the place where you would be sleeping, or according to your own humour) the words would be friendly and call one good names; but most of it was double-meaning things; you could take no sense out of it."

CASE 12.—Male æt. 36, single, fireman on an Atlantic liner. He has lost the sight of one eye through an old accident, but this fact has no apparent bearing on his symptoms. His hallucinations are not unilateral. He came to consult me in the year 1901, having been at one time in an English county asylum, from which he was discharged unrecovered. He recognised his own mental unsoundness, but attributed it to the machinations of persecutors. He said, "They started

those pocket reflecting kodacs with me three years ago, and illuminated my whole system and brain and intellect. They upset my head by this. They drew my mind and imagination; they took my mind out on the breath. It was my own mind which they kept repeating as they drew it out. When I was at sea in the stoke-hole they spoke to me through my nostrils; in this way they spoke through me to another man. They passed all kinds of smells upon me. They prodded me in the limbs and in the guts and in the penis. They produced sensations of lust" (and sexual orgasm). "I have seen the blue flash of light when they were illuminating my head."

CASE 13.—An old male sufferer from chronic paranoia, probably of many years' duration. Has been under treatment about four years. Generally noisy, violent, and rather incoherent, with episodes of depression and self-blame. Voices accusing him of all sorts of crimes. His chief complaint at all times is that his tongue is always wagging. "My tongue is cursing me every day, and I can't stop it; is there nothing will control a man's tongue? I have my senses and can't hold it; in spite of me it is always wagging and cursing." He is apt to denounce all doctors as rogues because they cannot keep his tongue from wagging.

Séglas, to whom we owe the phrase psycho-motor verbal hallucinations, and to whom we are also indebted for the most complete description of the syndrome, associates the "inner voice," the communication from spirit to spirit, and the like, with this condition. I have not detailed above any cases of this condition in which the connection between the mental impression received and the motions of the vocal organs was not pretty distinctly experienced by the patient. Even thus limited, these cases present several features of interest. Their resemblance to each other is striking. The frequency with which the formation of neologisms coincides with this class of hallucination is probably not accidental, nor is the existence of the double voice, nor is the almost invariable notion that the patient is a machine used by external agencies to communicate with others. The great prevalence of these hallucinations, though they have attracted little attention from English writers, must be apparent. Lugaro is within the mark when he says, in a recent article, that they can be counted by tens in every large asylum. In fact, I believe, if they are searched for, they will be found to be among the commoner symptoms of paranoia hallucinatoria. The study of the phenomena of psycho-motor hallucination confirms the now generally received doctrine of Tamburini as to the origin of hallucinations, and

is not inconsistent with the adoption of Tanzi's view, which may probably be justly considered an amplification and development of the opinions of the former author. But to this topic I shall return on a future occasion. Meanwhile I must express my obligations to my colleagues past and present, Dr. D. F. Rambaut, Capt. Sheehan, Drs. Cullinan, Fleury, Redington, and others, to whom I am indebted for many valuable notes among those from which the above cases have been abbreviated.

(¹) Read at the Medical Section of the Academy of Medicine in Ireland, March 13th, 1903. A paper dealing in a more summary way with psycho-motor hallucination was read at the meeting of the Irish Division of the Association, January 28th, 1903, when the discussion here reported occurred.

DISCUSSION

At the Meeting of the Irish Division, January 28th, 1903.

Dr. DRAPES thought it unwise to seek to locate the origin of hallucinations in any single region. As an irritation of any spot in the sensory path from a particular part may lead to pain referred to that part, so a lesion in any region of a sensory tract may give rise to an hallucination of the particular sense involved. That hallucinations may have a peripheral origin is shown by their frequency in cases of cataract, but of course they might also be of cortical origin. He referred to a patient of his own, suffering from a gross lesion of the brain, who had curious associated hallucinations,—a blaze of light followed by a loud report, loss of taste in half the tongue, and certain motor hallucinations. He thought those of *delirium tremens* were due rather to affection of the end-organs.

Dr. DAWSON was inclined to differ from Dr. Norman as to the need for assuming a special sense for moisture, the feeling of which was, he thought, a composite sensation made up of those of temperature and of touch, the latter being excited by alteration of cutaneous tension, etc. He agreed with Dr. Drapes in thinking that hallucinations might take origin at different levels. He did not see that even associated hallucinations need necessarily arise at a higher level than the cortical areas of sensation, as the intimate commissural connection of centres which commonly act together would be sufficient explanation.

Dr. NOLAN was relieved to hear that Dr. Norman had the same difficulty as himself in reconciling the various theories of hallucination. On the whole he considered that there was a distinct evolution of hallucinations, as where a vague noise is first heard, which gradually develops into a voice or other definite sound, a course of events which he had seen in many patients at the Richmond Asylum. In another case now under care the patient, who when sane suffered from retinal disease, had hallucinations of vague shapes before his eyes. Later he became melancholic on learning from an oculist that his case was hopeless, and then these shapes changed to those of definite objects.

Dr. EUSTACE asked whether in the experience of others olfactory hallucinations were common in general paralysis of the insane.

Dr. NORMAN, in replying, said that hallucinations were fairly common in cases of cataract, and presented the usual difficulties of explanation. He and Dr. Dawson were familiar with a case similar to that mentioned by Dr. Nolan, in which appearances were seen as of particles of moss falling like snowflakes before the eyes, these being probably due to affection of the diseased nerve-endings in the incipient optic atrophy from which the patient was suffering. The appearances became more complex as the disease progressed, taking the form of monkeys and devils. As to the evolution of hallucinations, sometimes an intelligent history was obtained of elementary hallucinations gradually developing into more complex ones, which often ended in the verbal form; sometimes, however, verbal halluci-

nations existed from the beginning. Cases of involution were even more instructive, such as that of a woman who had suffered for some years from voices of two persons accusing her of various crimes, but now says she no longer hears them, but that the sound "still comes upon her like a thought." This could best be explained on the supra-sensory theory of Tanzi. So complex a thing as an hallucination of the human voice could hardly originate merely in the sensory centre, stimulation of which would only produce a sense of noise. He had met with olfactory hallucinations in general paralysis.

Clinical Notes and Cases.

Clinical and Pathological Notes. By Dr. M. J. NOLAN,
Resident Medical Superintendent, Down District Asylum,
Downpatrick.

THE notes of the four cases to which I invite attention are of general interest rather than of purely psychological bearing; yet I feel they may not be the less attractive to you on that account. To others outside our specialty they may perchance help to demonstrate the indissolubility of the physical and mental aspects of our work in asylums. *En passant* it may be remarked that it has become rather too much the fashion of late for those who should know better to speak of our special avocation as "divorced" from the pursuit of medicine proper. For though existing modern methods necessitate a separation *a mensâ et thoro*, which holds the sick insane aloof from the sick sane, yet apart from the exceptional difficulties which beset us, our bond with general professional work is no less binding than that true, refined, and catholic specialism which searches out in connection with a diseased eye, ear, or nervous system, the concomitant manifestations of a constitutional dyscrasia.

CASE I.—*Swallowing of foreign bodies by a dement; safe passage of large nails per anum; perforation of stomach by a large bristle, which burrowed into the anterior abdominal wall, causing a chronic abscess, and necessitated surgical treatment; recovery.*—M. R—, æt. 43, admitted to the asylum December 15th, 1880, suffering from secondary dementia. A brother and an aunt had been insane. He had always been regarded as

mentally deficient. On admission he was found to be very morose, filthy in habits, addicted to masturbation, and a refuse eater. He enjoyed fairly good bodily health; had had no serious illness, but now and again suffered from acute abdominal pain, which was relieved by aperients.

Beyond a general improvement in health and conduct his condition remained unchanged for years. In December, 1901, he became more restless and difficult to watch, and was observed to lose weight and colour. About this time he had repeated attacks of intestinal colic due to ingested articles, such as pieces of wood, balls of paper, fragments of shoe-laces, etc. On one occasion he snatched a clay pipe from another patient and quickly swallowed the bowl. He was then given an abundance of bread and milk, porridge, and rice, followed after a few days by guarded aperients, but though he passed several small foreign bodies, such as those above noted, no trace of the pipe-bowl could be found.

On January 26th, 1902, he was seized with very violent abdominal pain, followed by a tendency to collapse. The same treatment was again adopted, when he passed a small piece of stone weighing about $1\frac{1}{2}$ ounces, eleven tin trouser buttons of ordinary pattern, and two large nails (exhibited)—one rather blunt-pointed, measuring $3\frac{7}{8}$ inches, the other very sharp, measuring $4\frac{1}{8}$ inches long. After an interval of some few days, during which he was carefully watched, the treatment was again repeated, but no other foreign bodies were evacuated. The patient then seemed to be restored to his usual state of health.

Some two months later, however, he developed an ovoid tumour about $1\frac{1}{2}$ inches below and 1 inch to right side of the umbilicus. This gradually increased until it acquired the size and shape of a hen's egg; at first hard and tense, it soon became soft and fluctuating. An incision gave vent to some 3ij of foul pus. A minute examination of the walls of the sac did not reveal any outlet from it, nor was there any indication of an underlying foreign body, such as the pipe-bowl, which it was supposed might have become encysted in the stomach, and the tumour so formed adherent to the anterior abdominal wall. The sac was thoroughly scraped out, treated by peroxide of hydrogen, and antiseptically dressed from the bottom. The result seemed at first entirely successful, but a fistula remained discharging a

few drops of pus daily, while a fungoid growth of granulations formed round the small opening, the line of the track of the fistula becoming meanwhile thickened and indurated. The patient's general health now began to decline steadily; he lost flesh rapidly and had repeated attacks of vomiting. On July 7th his condition became critical; it was then decided to place him under an anæsthetic and explore the abdomen if necessary. Dr. Tate, surgeon to the County Down Infirmary, commenced the procedure by laying open the full length of the sac of the fistula. Beyond the indurated walls forming the track nothing could be found to account for the hard mass to be felt through the skin, and the most careful examination failed to reveal any communication in the direction of the peritoneum. While, however, the operator was examining with the point of his knife along the rectus muscle, he nicked the connective tissue between two strands of fibres and caused a strong resilient bristle (from a bass broom) measuring $5\frac{1}{4}$ inches long to spring out. This was evidently the cause of all the trouble. The wound was treated as before, and healed in the course of a few days, the patient speedily regaining his usual robust health.

The points of interest are—

1. The passage of such long, sharp nails without injury to the stomach or intestine.
2. The perforation of the stomach by the flexible bristle, and the subsequent location of the latter in the line of the fibres of the rectus muscle.
3. The critical condition to which the patient was reduced by the most trivial of the ingested foreign bodies, and the possibility that more serious surgical measures would have been considered necessary if the simple cause had escaped the surgeon's observation.

CASE 2.—Cryptogenetic or septico-pyæmia; suppurative cholangitis, with infection of lung, bladder, prostate, and epididymis. General history.—The patient, D. S—, admitted August 17th, 1900, was received from Armagh Asylum, where he had been several years. On admission he was suffering from chronic mania, with auditory hallucinations. His general health was good, with exception of some degree of anæmia. His left hip-joint was ankylosed owing to tubercular disease in boyhood. From the date of his admission until January 13th,

1901, his mental and bodily state remained unchanged. On the latter day he had a rigor and was put to bed.

January 17th.—On examination physical signs of pneumonia at base of right lung. Temperature 102° , pulse soft and weak, occasionally intermittent. Turpentine stupes applied and general stimulant treatment—beef-tea, eggs, brandy, with Mist. Nuc. Vom. \bar{c} . Tinct. Strophanti.

January 19th.—General condition improved. Moist râles at base of right lung.

January 21st.—Continued improvement in local and constitutional condition.

January 25th.—Temperature normal ; breath-sounds normal over affected area.

January 26th.—Rigor. Complains of pain over kidney (right), also of pain in right iliac region, and of pain running down thigh half way to knee on anterior aspect. Temperature 102° . Local anodyne applications and general diffusible stimulants given, as patient became weak after profuse sweating ; temperature fell to 99° . Constipation.

January 27th.—Temperature 103.2° . Pain again complained of in same regions ; some degree of tympanitic distension of abdomen.

January 28th.—Temperature 104.8° . Sponging and antipyretic treatment. Increased distension, relieved by castor oil and turpentine enema. Profuse sweating. Constipated.

January 29th.—Morning temperature 101° , rising towards evening to 103° . General condition improved ; less pain locally.

January 30th.—Morning temperature 100.2° , rising in afternoon to 102° . All pain centred over pubes ; could not pass urine, which was drawn off ; No. 9 catheter used without difficulty. Urine high-coloured ; no abnormal constituent.

January 31st.—Temperature, morning 102° , falling to 101° in afternoon. Tympanitic distension again a source of pain ; relieved by enema as before ; urine drawn off.

February 1st.—Temperature rose to 102.8° ; pain and distension prominent symptoms. Pulse 108° , irregular and intermittent ; acute epididymitis on right side ; passed urine freely ; fluid high-coloured, otherwise normal.

February 2nd.—Temperature remains at 102.8° ; several rigors. Urine passed involuntarily during night ; drawn off to-day, contains mucus, and has ammoniacal odour.

February 3rd.—Condition unchanged ; fluid in right pleural cavity. Serum only drawn off by exploring needle.

February 4th.—Tendency to collapse ; pulse small and intermittent ; rigors. Free fluid in peritoneal cavity, changing with position of patient. Urine (diminished in quantity) drawn off ; odour offensive.

February 5th.—Patient free from pain ; pulse small and intermittent ; heart-sounds very faint ; skin flushed and moist. Temperature falling from 101° in the morning to 98° towards evening. Catheter used ; flow of urine sluggish, force depending on respirations, which are frequent and shallow. Temperature rose at night to 105° ; weak, delirious, picking at bedclothes.

February 6th.—Died at 7.30 o'clock a.m.

Post-mortem examination, made at 2 o'clock p.m. same day, showed congestion of base of right lung, with clear serum in right pleural cavity. Heart fatty.

The liver acutely congested ; on the under surface a small quantity of pus, confined by recent adhesions, and due to suppurative cholangitis. Kidneys normal.

Prostate gland enlarged, tense, and fixed, owing to prostaticitis. On cutting, pus oozed from the surface of the sections.

Microscopic examination of the liver showed fatty infiltration, with excess of fibrous tissue between the lobules (section exhibited) ; no abscess.

On sections of the prostate a large number of glands are seen embedded in fibro-muscular tissue. Some are dilated into cysts and suppurated, forming small abscesses (section shown).

CASE 3.—*Melancholia with universal acute eczema ; recovery.*—R. A—, patient *æt.* 43, was admitted to asylum on October 31st, 1900, suffering from recurrent melancholia of a religious type—a Covenanter, she believed herself guilty of the worst vices of the Court of Charles II, but expressed an intense desire to do better. She speaks with apprehension of her sister's death in this asylum, and of her own previous attacks, and is generally emotional. Her general health good—no evident organic disease. A few weeks later she became more distinctly depressed, and passed into a semi-stuporous state, having little idea of time or locality. This phase lasted some ten days—20th to 30th of November,—when she became

brighter, ate and slept well, and engaged in cleaning the ward. She then stated that when semi-stuporous she thought she had died, and was in heaven. She then became depressed again and developed an eczematous condition of pudenda, due, it was assumed, to an irritating leucorrhœa. She was put to bed and treated for this condition, but soon the inflammatory erythema spread along the inner aspect of her thighs, and thence down her legs, and upwards to the abdomen. In the course of a fortnight the disease completely invested her from scalp to feet, so that she presented a perfect example of what Hebra terms a rare variety of the disorder—namely, universal acute eczema (photograph shown). Notwithstanding the dictum of that great master, the palliative and expectant treatment did not promise to be a success, as the disease lasted from week to week, and then ran into months, the unfortunate victim in the meantime suffering intense agony and misery from the pain, tension, and itching, which lasted all day and the greater part of the night—the characteristic insomnia being one of the greatest difficulties to overcome. All this time the disease exhibited itself in its various stages—vesicles, excoriations, pustules,—all modified by the special regions affected. Having covered the whole external integument, the disease affected the mucous surfaces in continuity; a foul stomatitis, a muco-purulent bronchitis, catarrhal diarrhœa, conjunctivitis and cystitis developed in rapid succession, while the external auditory meatus became blocked.

Coincident with these conditions general constitutional disturbance became manifest, and the patient's condition became alarmingly prostrate. The disease had now lasted some six months, during the greater part of which the usual remedies were tried without effect. About the beginning of May I commenced to treat her with ichthyol internally and externally, and the beneficial effect became at once evident. No fresh patches of the disease developed, the exudation ceased, the scales were shed in enormous quantities, leaving clean healing surfaces. By the end of May the patient was completely rid of all traces of the disease, and rejoiced in a satin-like skin and a complexion of the poetic "milk and roses" type so rarely seen *au naturel*. She was discharged in July quite recovered, mentally and physically.

The points of interest would seem to me to be—

1. The typical manifestations of a rare variety of eczema.

2. The apparently specific action of the ichthyol treatment.
3. The associated affections of all the orifices of the body.
4. The danger to life by constitutional effects of the toxins produced by such extensive disease.

Just a word with reference to the mental condition. While one must admire the keen incisive criticism of Hebra—a quality which makes his work so valuable,—and while one must agree with him that there is no definite relationship between skin disease and insanity, yet it is noteworthy that in this case the real acute bodily misery routed the apathetic delusional melancholia. It is possible that if the mental and bodily ailments had been approximately synchronous at the onset, the eczema would certainly, with evident good judgment, have been regarded as the *cause* of her insanity. It may perhaps be rash to surmise that it promoted her mental recovery, but that it should not have retarded it seems most remarkable.

CASE 4.—*Senile melancholia associated with fatty infiltration of the heart, and aneurysm of aorta ; rupture into the pericardial sac ; death.*—A. McA—, æt. 62. Patient was admitted from Kilkeel Union Workhouse on February 9th, 1900, suffering from acute melancholia of ten days' standing, with delusions of persecution, hallucinations of hearing, refusal of food, and suicidal impulse.

On examination she was found to be well nourished ; she suffered from cataract, atheroma, and very well marked *arcus senilis*. Her pulse was slow, soft, and at long intervals intermittent. There was a certain degree of cyanosis, and she suffered from dyspnoea on slight exertion. She was free from all other evident organic diseases.

During a year under tonic treatment she improved mentally, losing all acute excitement, sitting quietly all day and speaking little. She took food well, and improved in general health. From February to May, 1902, her condition remained practically unchanged, except now and again, when she became rather more depressed than usual, wishing she was dead, declaring she was no use, and stating that persons kept her awake at night saying, "It's she that did it."

On the morning of May 4th, when she appeared in her usual state, on the way from Mass to the hospital she stumbled

to the ground, but did not faint. She was raised, carried to bed, and examined. She then complained of pain in the cardiac region, and a sense of faintness. The heart-sounds were extremely weak and distant, and the cardiac area of dulness was much increased. Her pulse became small, irregular, and intermittent, her face and limbs more cyanosed, and her respirations shallow and frequent. Her intellect became clearer; she spoke rationally. During the day she became more and more asphyxiated, and her heart became more embarrassed, until she sank on the morning of the 5th, all restorative treatment proving useless.

Post-mortem examination 9 o'clock a.m. on May 5th. No gross lesion of brain; membranes all adherent; emphysema of lungs; fatty infiltration of heart. A dissecting aneurysm of ascending arch of aorta at base of heart had ruptured into the pericardial sac,⁽¹⁾ which was full of blood (specimen exhibited). Fatty degeneration of kidneys. Cyst of right kidney and cyst of right ovary.

⁽¹⁾ A like case is recorded in the Report of the Director of the Pathological Laboratory and Pathologist to the London County Asylums, 1902.

DISCUSSION

At the Meeting of the Irish Division of the Medico-Psychological Association, November 25th, 1902.

After a few remarks from the Chairman—

Dr. CURRAN suggested that the primary morbid condition in the second case was pneumonia, and that it was probably a case of pneumococcic septico-pyæmia. It was probably due to the high power of resistance that the patient was able to withstand the poison so long,—that is, until the disease reached the transition stage between septicæmia and pyæmia.

The SECRETARY thanked Dr. Nolan for his paper. With reference to the first case, he had seen about ten ounces by measure of miscellaneous articles, such as broken spoons, buttons, etc., which had been taken from the stomach of a lunatic dead from some other cause. The tolerance of the intestinal tract in the insane was remarkable. He was inclined to agree with Dr. Curran that pneumonia was the primary condition in the second case. In a patient of his own the pneumococcus had acted so virulently as to produce superficial gangrene of the lung, and such violent action should probably be set down to diminished resistance of the tissues. With regard to Case 3, he would like to ask whether in the experience of those present acute eczema was specially common in the insane. In an old paranoiac suffering from a prolonged period of obstinate constipation he had seen acute pustular eczema of the scalp and back of the head on one side develop suddenly, and almost as quickly disappear without special treatment. He would be glad to know whether others had found such cases of common occurrence.

Dr. T. A. GREENE said that, as regarded the process of infection in the second case, the patient had probably swallowed a great deal more of the infected sputum than a sane person would have done. Alluding to the last case, he mentioned that of a patient of his own who suffered from Bright's disease, and had a serious attack of convulsions. His clergyman was sent for, but, objecting to religious

ministrations, he became very excited and died suddenly. It was found that, as in Dr. Nolan's case, an aneurysm had ruptured into the pericardium. He wished to ask whether the urine in the case of eczema had been found to contain albumen, as he had observed it in some cases under his own observation.

The CHAIRMAN alluded to the trouble caused in asylums by the habit of swallowing foreign bodies, and mentioned a case of pica in which a floating abdominal tumour was found during life in a child, and after death was discovered to consist of a mass of Berlin wool completely filling the stomach and taking its shape. In another case, at the Richmond Asylum, the patient suddenly developed an attack of pneumonia, of which he died. Half of the iron heel-tip of a boot was found hooked on to the bifurcation of the bronchi, and was apparently the cause of the pneumonia; and a number of objects were found in the intestines, including a seven-inch teaspoon, the bowl of which lay in the hepatic flexure of the colon, while the handle had passed through the wall and was in the interior of a cavity formed by peritoneal adhesions. Recently a melancholic woman who had been wasting for some time died after an attack of diarrhoea, when the stomach was found to be filled with a mass of blanket-fibres, of which a smaller mass lay in the jejunum. Passing to the second case, the speaker referred to a well-known recent case of septicæmia with pneumonia arising from a scalp wound, in connection with which a legal authority had declared that pneumonia could not arise except from cold! His experience of eczema was that it was not specially common in the insane, but he had seen very extensive eczema take rise from the local application of belladonna in a private case. In the fourth case the form of aneurysm was that which oftenest escaped detection. He had seen three cases, one of which had ruptured in the same position as in Dr. Nolan's patient. Another was that of an apparently healthy old woman, who going out to defæcate on a cold night was found lying dead after a short time, a ruptured dissecting aneurysm being discovered *post mortem*. A third patient, a general paralytic of long standing, had also died during defæcation from rupture of a dissecting aneurysm which involved practically the whole aorta. Death in such cases was due to the pressure exerted upon the heart by the blood in the pericardium, not to the mere loss of blood.

Replying, Dr. NOLAN said that in his experience eczema was not more frequent amongst the insane than in the general population. In the special case he now reported, the urine contained no abnormal constituent. He thanked the meeting for the kindly consideration given to his communication.

Two Cases of Abdominal Surgery in the Insane from Attempted Suicide. By ROBERT JONES, F.R.C.S.Eng.,
Medical Superintendent, Claybury Asylum.

M. T—, æt. 35, a servant, of dark complexion and bilious temperament, suffering from suicidal melancholia, whose insanity was greatly due to privation, was admitted July, 1894, in a weak, emotional, and tearful state, saying she was unhappy, had nothing to live for, and wished to die. She also stated that before admission she had threatened to drown herself. There was some congenital weak-mindedness and a marked retardation of mental reaction.

A month after admission she began to improve and became brighter, taking more interest in her surroundings; but four months later she

relapsed into a sullen, resistive manner, with a recurrence of suicidal tendencies.

At the end of a year she appeared much better and helped in the ward, but after some time she again relapsed, and for the next three years she was alternately bright and depressed, with weakened inhibition and diminished self-control, being easily upset by trifles, and often imagining people were against her. At times, during the latter moods, she would be impulsive and spiteful to others. She alternated mentally between two extremes, being either acutely despondent or violently impulsive and troublesome.

Four years after admission, and having some weeks before again threatened suicide, she one evening told the nurses that three days ago she swallowed, head first, a hat-pin about eight inches long, with a big beaded head to it. She had been complaining of pain in her side for some days, and was one day in bed. On this evening, after admitting that she had swallowed the hat-pin, what seemed like a pin-point could be felt through the skin of the abdominal wall, and the same evening she was placed under an anæsthetic—chloroform—with the intention of removing it.

When under the anæsthetic the point of the pin could be distinctly felt, but on cutting down upon it the point moved and disappeared. An incision was now made in the middle line from below the xiphoid cartilage to the umbilicus for about three or four inches, which left a quite free external opening. The incision was carried through the skin, subcutaneous tissue, and tendinous wall of the linea alba. The peritoneum was known by its fasciculation and translucency. All bleeding was arrested in the lower angle of the wound, and the peritoneum, which was hooked up so as to include nothing else, was then opened upon two fingers. The pin was now seen, and found to have passed through the wall of the stomach. It was held up and pulled outwards, so that the stomach came well *in situ*. Traction was made upon the stem of the pin in order to dislodge the head if possible, but the head and stem refused to part. I then contemplated cutting the stem with a bone forceps close to the serous covering of the stomach, but the fear of subsequent damage to the mucous coat in its travels along the intestinal canal favoured the only alternative, *viz.*, to open the stomach itself and remove the whole pin. On making traction upon the pin the stomach was again brought well forward into the opening, and the part perforated by the pin brought out of the wound. Sponges were packed well around the wound to shut off the peritoneal sac and to steady this part of the stomach. The stomach was then opened by an incision about a quarter of an inch long, transverse to its long axis, and as far as possible the blood-vessels were avoided, but several sprang as the incision was deepened into the mucous membrane, and were at once commanded by Spencer Wells' forceps. Very free hæmorrhage took place, and the pin was removed. The vessels were compressed, but not ligatured, and eight or nine sutures were inserted into the mucous membrane, the incised edges of which were then brought together. A similar procedure was adopted, after Lembert's method, in regard to the peritoneal surface, which insured the two serous surfaces being in contact. The stomach was now returned into the peritoneal cavity, and no blood, so

far as could be avoided, no mucus, nor stomach contents were allowed to escape into the peritoneal sac. The outer wound was then closed with a continuous suture.

The patient took the anæsthetic well, but was rather troublesome afterwards, in spite of Suppos. Morph. gr. $\frac{1}{4}$. She went on fairly well for the first day after the operation, but in the early hours of the morning of the second day she had a severe sickness, which, together with obstinate restlessness, caused the stitches to rupture, the wound to open, and the intestines to protrude. I was immediately summoned by my colleague, Dr. Emily Dove, and on my arrival found several coils of the intestines out of the abdomen and the dressings removed. She was again placed under an anæsthetic, the continuous suture was completely removed, and the coils of intestine were each carefully washed and cleansed. Warm aseptic sponges were soaked in boracic lotion and boiled water; they were well wrung, and applied to the whole of the intestines protruding, which were then returned into the abdomen. The peritoneum was carefully "toiletted," the serous edges were sutured with separate sutures, and the whole wound brought into good apposition and thus retained by separate stout silk sutures. Iodoform was dusted over the wound, and dry gauze well packed over this; the abdomen was uniformly and evenly bandaged, and over all a binder was sewn.

After this she made uninterrupted progress; the temperature never rose above 100° , and this only in the evenings. For the first forty-eight hours after the second operation but little was given by the mouth, save ice, barley water, and meat juice. At the end of the week the bowels had twice acted naturally and the wound was satisfactory. In another month the patient was physically quite convalescent, able to go out of doors daily and to take an interest in her surroundings. Mentally, however, she varied much, being either impulsively suicidal, threatening, and destructive, or quiet, reasonable, helpful, and pleasant. About fifteen months after the operation she was transferred to another asylum, having been resident in Claybury just over five years. It is four years since she has been transferred, and her mental state, I am informed, remains unimproved.

Remarks.—There are comparatively few occasions upon which it becomes necessary to make an incision into the stomach, even in sane persons, and these are usually for the removal of foreign bodies, the majority of which are swallowed and pass down through the pylorus. When this becomes inevitable the hospital surgeon—with experience of many and frequent operations, with all the necessary instruments at hand, and every desirable assistance available—contemplates such an operation with equanimity. When, on the other hand, an emergency occurs suddenly, with limited facilities for carrying out aseptic precautions, and when the operation is performed upon a person who is bent upon frustrating all his efforts, the

operator is compelled to deliberate, and may perhaps be pardoned for hesitating to take immediate measures until other sources are exhausted. In this case there was no doubt what to do and when to do it. The end fully justified the procedure. One word of warning may, however, be sounded against the continuous suture, in which, when one part becomes loose, the whole becomes insecure. Except with the Lembert method in combination, I would not again use the continuous suture.

CASE 2.—In contrast to the foregoing is the case of B. Z. S—, an Arab, over 60 years of age, who accompanied the British troops to Lower Egypt in 1888 and afterwards found his way to England. He was admitted November 19th, 1898, suffering from restless melancholia with marked suicidal propensities.

He was at times frenzied with excitement, but looked exceedingly miserable. By day he sat about with a downcast look, crouching on the floor, and having a cringing, dependent look. Although thin, he was a fine specimen of a Soudanese Arab. He could speak no English, but another patient speaking his language could converse with him. In order to obtain access to his mental condition the Professor of Arabic from King's College, London, was requested to visit him as an interpreter. He improved a little in bodily condition soon after admission, under improved physical surroundings, but no marked mental change occurred. Nearly four months after admission, whilst actually under observation in the "special" dormitory, he was found at 2.30 a.m. to have his hands smeared with blood. Upon examination he had an irregular wound about two inches long in the middle line of the abdomen, through the peritoneum. Coils of intestine were lying exposed under the bed-clothes; they were immediately covered with hot sponges soaked in boracic lotion. The patient was anæsthetised (chloroform), the incision enlarged upwards and downwards, the intestines carefully cleansed, examined, and—with the exception of one coil, which was found to have four punctured wounds in it, one an inch in length—were returned into the abdominal cavity. The loop was sutured into the wound and an artificial anus made. The patient was returned to bed with hot water bottles, and was kept under special supervision. A small blood-stained piece of glass was found under the patient's bed in the morning, but it never transpired how the injury was inflicted. The patient's wound was dressed the following day and appeared healthy. There was abdominal respiration and no marked tenderness, the urine was passed naturally, the temperature was low, but the pulse was feeble and irregular. Later on tenderness of the abdomen was noticed, and there was less movement; nourishment was indifferently taken, and as the patient was a Mohammedan he obstinately refused brandy, which, with peptonised milk, had to be given by the nasal tube. On the third day the pulse

was hardly perceptible, respiration was rapid, shallow, and entirely thoracic, the general condition was very unfavourable, collapse set in, and he died early on the fourth day after the injury.

Post-mortem.—An examination revealed every sign of septic peritonitis. Coils of intestine were seen to be dilated and deeply injected. The extruded coil had two large wounds, and was almost black with congestion. There was generalised purulent exudation, with recent adhesions; about 70 c.c. of purulent fluid were taken from the pelvis. The small intestine had three holes in it (apart from the one which formed the artificial anus); two of these were about 10 mm. long, the other 4 mm. The first wound was two inches above the cæcum, the second four inches, and the third four inches further.

Remarks.—With the experience of these two cases I am now of opinion that it would have given the last case a better chance if the “toilette of the peritoneum” had been carried out after having carefully sutured the wounds in the intestine by the Lembert method. With the means at our command at the present time, and the experience derived from operations after perforated gastric and typhoid ulcers, I should be disposed in future to close all intestinal wounds and to irrigate and douche the peritoneum, effecting a systematic cleansing, as taught by Maclaren, who directs that the folds of the mesenteric attachments of the small intestine, the lumbar and pelvic hollows, and all pockets should be well douched to avoid the risk of spreading septic conditions, and that this should be done thoroughly and in sequence from the cæcum to the colon under the liver, and from the stomach to the rectum. It remains to be said, however, that there are some authorities who consider that to irrigate, douche, or cleanse the peritoneum seriously diminishes the resistance of this serous covering, and that such a course favours the effusion of serum, which becomes the pabulum for septic organisms introduced previously, or by the process, or left behind after its completion.

A Case of Hebeephrenia. By W. R. DAWSON, M.D.(Dubl.),
F.R.C.P.I., Medical Superintendent, Farnham House,
Finglas, Dublin.

THE term “hebeephrenia” was first used by Hecker (1) and Kahlbaum many years ago to denote a peculiar sequence of morbid mental phenomena commencing at puberty, or in early

adolescence, and considered sufficiently constant and definite to be classed as a separate form of mental disease. The subject has been especially studied on the Continent, but the position which the group of symptoms should occupy is not even yet agreed upon. So prominent an authority as Krafft-Ebing has stated, in the last edition of his *Lehrbuch* (2), that the correctness of making hebephrenia a distinct disease still seemed to him questionable; while, on the other hand, Kraepelin (3) accepts the distinction and makes hebephrenia one of the three varieties of "dementia præcox."

The exact delimitation of hebephrenia has probably differed somewhat in the hands of different writers; but, taking Kraepelin's description for a foundation, as being the most up-to-date, the following would seem to represent the present significance of the term:—

The disease always occurs in hereditarily predisposed individuals, and typically about puberty. It may begin either with a period of depression, in which suicide may be attempted, or more insidiously, the patient becoming self-absorbed, morose, and solitary, or irritable and obstinate. The patient then grows apprehensive, depressed, and suspicious, and suffers from hallucinations, most frequently those of hearing (which take the form of voices or inarticulate noises), but also of sight, smell, and common sensation. At the same time he acquires delusions of personal unworthiness, of suspicion (poison; being worked upon by others; that his thoughts are not his own, etc.), and later of an expansive character. These last are accompanied by fabrications. At first the patient is quite conscious that something is wrong, both consciousness and orientation are little impaired, and he is quite coherent. Memory for recent events soon shows deterioration, and judgment is early affected. The patient becomes dull and indifferent, but is self-centred, with mental depression and irritability. Masturbation is frequent. Conduct becomes more and more childish; there are bursts of senseless laughter (a very prominent symptom), and various purposeless actions. Obstinacy alternates with facility. Speech shows looseness of thought and confusion, and there is a love of long words and stilted phrases. At first the appetite is poor, sleep is disturbed, and there may be some trophic disturbances, but these pass off later. The disease is progressive, but there are frequently remissions, especially in the earlier

stages. As it runs its course the mental enfeeblement increases, but the delusions and hallucinations fall into the background and disappear. There may be periods of excitement, however. Marked dementia appears in from six months to several years, and in the vast majority of the cases continues to deepen. A few, however, recover to a certain degree, and in some others the disease remains stationary. Thus the essential features of hebephrenia are a progressive mental weakness beginning about puberty, and accompanied in the first stage by mental depression, with hallucinations and delusions, which subsequently pass off. It appears to cover much of the ground occupied by the insanities of puberty and of masturbation in some other classifications.

The frequency of the condition is also a matter of dispute, but it appears to be sufficiently rare to justify me in bringing the following case under your notice :

The patient, a youth æt. 18, was admitted as a voluntary boarder on March 1st, 1902. There was some neuropathic tendency on the paternal side. His father, who was still alive, suffers from chronic constipation. A brother died of cardiac disease.

The patient himself is said to have always been a solitary boy, but when at school he joined in football. For the two years previous to admission he was apprenticed to an architect, who had little business and left him very much to himself. He lived in a hotel, being absolutely his own master, keeping to himself, and maintaining late hours and irregular meal-times. He was a vegetarian. His only recreation was reading. General health was good, except for chronic constipation, and he had had no severe illnesses. He was not dissipated, but by his own account had masturbated for four or five years, though generally only about once a week ; at one time, however, not very recently, he did so as often as once a day. He said he had felt depressed for two or three months, and it was noticed that he had lately found it hard to keep warm.

On Feb. 23rd he was noticed to be a little odd, and next day he walked about one and a half miles down the quay and threw himself into the river. He changed his mind and scrambled out, went to a neighbouring Sailors' Home to dry himself, and then back to his lodgings. His motives for this act he explained differently at various times and to different persons : (1) he did not believe in a hereafter, and did not expect ever to be well ; (2) there was a lower and a higher class of people, and he, belonging to the lower, ought to make way for the higher ; (3) he would never have done it had he not been drugged ; drugs were put in his milk ; (4) he did it because of religious depression. He showed a tendency to delusional suspicion. He was sent to a private hospital at first, but did not get on well there, and so was persuaded to place himself under my care. According to himself, he had not masturbated for some eight or ten days before admission, but he was suspected of doing so at the private hospital.

He was a short, but well-made and rather good-looking lad, of a boyish aspect for his years, well-nourished, and with a fairly developed musculature; but he looked pale, neurotic, and debilitated. The only stigma noted was a rather high and narrow palate. His physical state was normal,⁽¹⁾ except that the pulse was rapid and a systolic bruit was audible everywhere over the heart, with accentuation of the second sound; but the area of cardiac dulness was not increased. The urine showed no abnormality. He was fairly cheerful at first, and joined in games, but said that there was no use in living, as he saw by his appearance in the glass that he was degenerating and falling in the social scale, and that this was his reason for attempting suicide. His general intelligence appeared to be good, however, but he failed to recognise the nature of the institution. He seemed easily fatigued.

On the night of March 3rd he was wakeful and perspired a good deal, and next day was depressed and complained of cold, and his temperature was subnormal. He asked that a bullet should be put into him if he did not recover. A mixture containing strychnine and phosphoric acid was ordered. For about a fortnight after this he was in the main depressed, but was somewhat variable, as now and then he would brighten up. He cried a good deal, and often would not answer questions, but he could be got to play both indoor and outdoor games. He manifested a number of delusions—that he was being tortured, that his sisters who visited him were not really so related to him, that poison was given him, and things done to annoy him. He also complained of various noises—that every one entering the room began to whistle, that the door creaked on its hinges, and the birds made maddening noises, and that someone was grinding a mill and making other sounds under his window at night, the object, so far as he alleged one, being to annoy him and make him mad. He also said that his mother had been tortured to death, as he was being. He spoke without reserve of his attempt at suicide, and seemed amused at some of the details, and he frequently expressed a wish that he was dead, and once tried to keep his head under water in his bath. Sleep was poor at night, and trional had to be given, but he was often drowsy in the daytime. As his bowels continued constipated, a mixture containing cascara and strychnine was ordered on the 10th, and to this tincture of strophanthus was subsequently added. His general behaviour and attitude of mind were rather childish, and he had vague ideas of wrong done him by his relatives in "keeping him in the dark all his life," as he put it, but could give no very clear explanation of what he meant. There was no reason to think that he was masturbating at this period, and he himself denied it and said he never thought of it now. Cold baths were added to the treatment.

About the end of the third week he began to show improvement, becoming more cheerful and reasonable, and eating and sleeping better, while his bowels were kept regular by the mixture. He developed the habit, however, of emitting sudden explosions of laughter now and then without cause, and was sometimes emotional. He also spoke of a plot against him, thought he was in some way the cause of epileptic fits in another patient, and studied himself and his sensations very closely, complaining that his lips felt stiff, and the like. He was always asking advice on such topics as whom he should imitate in his appearance and

conduct, etc. Still he was and felt undoubtedly better both physically and mentally, and began to find the restraint irksome. His delusions and fancies also were more transitory, and less in evidence. The cardiac bruit disappeared, and the sounds became stronger. He was discharged on April 12th, greatly improved and in good spirits, and before leaving asked for advice as to his mode of life and general conduct, and professed to intend to follow it.

For about a fortnight after his discharge he continued well and natural, and helped his relations in some packing; he continued taking the mixture, and kept up the mode of life that had been advised. He then took a long journey to another locality, after which he was not so well mentally, but this was perhaps partly owing to an undue amount of solitude. He appeared to be always brooding upon something, and would not take much notice of what was going on around him, nor could he be got to speak except with difficulty. He also adopted a peculiar gait, "as if walking upon eggs." By his own wish he returned on May 24th, when, though looking healthy, he did not seem quite so well as on leaving, and the cardiac bruit was again audible at the apex. He seemed brooding, suspicious, and depressed, and was silent, only answering questions with difficulty, and evidently wishing to be alone. He said he was not worrying about his mental state so much as before, but preferred not to be too cheerful, and admitted that he thought I had been trying experiments on him, which were the cause of his having been worse at first after his previous admission. He sometimes walked peculiarly, placing one foot very exactly in front of the other, and he carried one shoulder high, saying that he could not lower it. His memory showed signs of failure, at all events for recent occurrences. The bursts of laughter still occurred occasionally and have persisted ever since, though sometimes with considerable intervals. At first he said that he laughed because everything seemed funny to him, but not long since he denied that he was laughing; "far from it," he added. On the day after admission he said he heard the voice of a person whom he knew to be in Belfast, so that it must have been imagination. He was much more silent, morose, and intractable than on the previous occasion, showed a curious perversity in doing what he was asked not to do, and was once or twice violent when prevented from doing something. On admission he was found to have sugar in his urine, and was dieted accordingly. The sugar had disappeared by June 18th, and has not since returned. Simultaneously there was some slight improvement and he became brighter, and even at his worst he would always join in games. He was masturbating about this period, and made no secret of it or of his intention to continue the practice, as he said it made him feel better; he said he had no wish to get well altogether. He continued fairly cheerful, but otherwise unchanged for the next six weeks; but the inspector insisted on his being certified, as he did not consider him capable of understanding his position. On several occasions he walked into Dublin with one of the assistants, and once he wanted to go into the dissecting-room of the College of Surgeons. He showed great indecision as to what he wanted to do in the town, but gave no trouble about returning. He continued emotional, and would shed copious tears at times.

In the beginning of August he began to complain again of noises in his room at night (such as whistling and dropping of pebbles down the chimney), which he thought were under my control. The former were probably distant railway whistles, and when his room was changed to the other side of the house he no longer complained of the noises. Before this was done, however, he on several nights hammered and made a noise in his room, apparently with a view of overmastering the other sounds, and one night he broke the fender against the grate, asserting that people were concealed in the chimney. The noises he still hears, but says that they no longer annoy him. In August he also complained of feelings of discomfort in his head, pains in his ears, and bad smells, which he thought were *not* from outside, and he also complained of peculiar feelings in his face impelling him to grimace and forcing his mouth into certain positions, some of which were uncomfortable. He thought that I placed the fibres of his mouth in certain positions, which enabled him to move his mouth into certain other positions. The object of doing so was to call up in his own mind the train of thought that had been passing through the minds of persons whose faces he had seen in similar positions. This applied also to positions of the tongue, hands, and other parts of the body. (It may be mentioned that no grimacing had been noticed by others.) He had vague delusions about my wanting to get at his thoughts, and wanted to know whether his saliva was not secreted by a gland different from that which had secreted it when he first came, as he swallowed it in a different way. He said he could think of nothing but his mental phenomena, and has frequently asked for books on the brain in order to study the subject. He said he was not masturbating much at this time. Later in August he complained of being "imposed upon" by locking his door, and in other ways, and showed me a notebook in which he had printed in pencil the grounds of his complaint, which included chemicals in his food, medicine to make the muscles of his face twitch, "deceitful lying," etc., and also a note: "If I am not imposed upon I may benefit mankind." Since then he has been variable, but on the whole more silent, morose, and solitary, only answering in monosyllables, if at all, when spoken to, and showing a tendency to ape the tricks of other patients. His silence he once attributed to being in doubts about everything, and he said also that I could read his thoughts, and implied that he had not control over his own mind. He played billiards and golf, and seemed to enjoy them, but otherwise simply mooned about. He masturbated a good deal in the autumn, but for about four weeks past has done so little, if at all, and for about that time he has appeared more intelligent, and at the same time more depressed, and has been very anxious to leave, saying that he is getting worse. The treatment was necessarily only symptomatic and general, and as his father wished him to try a sort of hydropathic treatment he removed him on probation on the 23rd inst. His heart is still weak, but there is no murmur. The unpleasant feelings in his face have ceased. He has never given evidence of any ideas or delusions that could be called sexual.

Thus we have a certain degree of childishness, with mental

depression of gradual onset and not very profound degree, accompanied by delusions and hallucinations (both of which seem to be passing off), as well as by other characteristic symptoms. On the whole there has been gradual mental deterioration, with, however, one remission. The case therefore seems to be undoubtedly one of genuine hebephrenia, although it has not lasted long enough to show the marked dementia of the later stages.

The relation of hebephrenia to some other forms of mental disease is interesting. That it is essentially a psychosis of the degenerate was first pointed out by Fink, (4) who considered that those who suffer from it have really been affected from birth with a slight degree of idiocy, which, latent during childhood, becomes manifest after puberty owing to the claims of a higher psychical activity and increased stress of life. It is perhaps hardly necessary to assume that such patients have always been somewhat imbecile, but in many respects the psychosis does appear to be nearly related to idiocy, and especially in being, at first at all events, a failure of development rather than a mere degeneration. The resemblance of the earlier symptoms to that phase of frothy emotionalism, egotistical introspection, and sentimentality through which most pass at puberty is evident; and, in fact, it seems to be essentially a hypertrophy and fixation of these normal peculiarities of the period, just as idiocy is of those of early childhood. But it differs from idiocy in that the dementia is progressive and eventually replaces all the other symptoms, whether this dementia is altogether primary and inherent in the disease, as seems to be always assumed, or whether it may to some extent be considered secondary to the more acute early symptoms. As the brain is always initially a weak one, this latter suggestion does not seem improbable. (On the other hand, imbeciles often become more weak-minded at puberty, but this deterioration does not seem to advance beyond a certain point.)

The resemblance of hebephrenia to paranoia is undoubtedly considerable, but this is only true in the earlier period of the former disorder, and the differences (especially the very marked dementia and the temporary nature of the delusions in hebephrenia) are so marked that it is difficult to understand how they could have been classed together. Whereas hebephrenia is the

hypertrophy of the characteristics of a period, paranoia is the hypertrophy of certain of those of the individual. I should be inclined to consider the disease as partly a failure of development and partly a degeneration, but, as the degeneration is dependent on inherent weakness, this is perhaps not so much of a distinction as it sounds.

Lastly, it may be asked what part is played by masturbation in its etiology. Although this habit when practised to excess probably hastens the process of mental degradation, it seems to me that there is no sufficient reason for holding it to be other than a symptom of the general mental disorder.

REFERENCES.

1. Hecker's original paper was published in Virchow's *Archiv*, Bd. lli, p. 394, but I have unfortunately been unable to obtain access to it.
2. Sixth ed., p. 146.
3. See Defendorf's English abridgment of the *Lehrbuch der Psychiatrie*, pp. 152 ff. and 162 ff.
4. *Allgem. Zeitschr. f. Psychiat.*, Bd. xxxvii, p. 490.

(¹) It should have been mentioned, however, that there was a small cyst on the right spermatic cord, and that the prepuce was long, though it could be fully retracted.

DISCUSSION

At the Meeting of the Irish Division held at the Royal College of Physicians, Dublin, January 28th, 1903.

Dr. LEEPER asked whether suicidal attempts were frequent in the early stage of cases of this class, as he had seen a patient in whom the disease had seemed to manifest itself in this way or by violence. He had been trying lecithin in young degenerative cases, and would be glad of the experience of others with this drug.

Dr. DRAPES, alluding to the existing difference of opinion as to the application of the term hebephrenia, expressed the opinion that it was misleading to assign fixed appellations to such vague and indeterminate groups of symptoms. He was not yet clear as to whether hebephrenia included all cases of insanity occurring at puberty, or whether it was restricted to those associated with masturbation. He had had cases of recurrent insanity at this period, regarding which he wished to ask whether they were to be considered examples of hebephrenia or not. One such patient was at first in a hilarious, exalted state, recovered from this, and returned after a time in a condition resembling imbecility. He was sent to the sea, and is now doing well. Another was a lad of seventeen in a demented state, who developed paralysis and a large sacral bedsore, but recovered under thyroid treatment. Was either of these a case of hebephrenia?

Dr. CONOLLY NORMAN agreed that the case was one of hebephrenia, and, as he had seen the patient, wished to add, with reference to his degraded habits, that he had a small varicocele and an elongated prepuce. Speaking of the questions raised by Dr. Drapes, he said that although elaborate classifications of insanity were of little worth and confusing, he thought that hebephrenia existed as a type, and that some such attempts at classification must be made if the subject were not to become a mere mass of endless detail. Precocious dementia had been divided by Kraepelin into hebephrenia, katatonia, and paranoid insanity, of which he believed in the first two, but thought the last a mere dumping-ground for all cases which would not conform to the other two types. In this particular case there were

a number of interesting points. The boy gave four or five contradictory reasons for his attempt at suicide, which showed that none of these was the true reason. Such attempts were to be set down to perversion of normal instinct, and not to any definite reason. The group of paranoia-like symptoms which he showed at first— notions of his thoughts being read, together with the grandiose idea that "he might benefit mankind," and hypochondriacal delusions—have been assigned as evidence of degeneration; and he agreed that the form of insanity was one of arrested development. Fatuous attempts at suicide are common in such degenerative cases. He pointed out that the condition called hebephrenia is identical with a form of insanity described by Skae under the name "hereditary insanity of adolescence."

Dr. Dawson, in replying, said that attempts at suicide were common at the early stage of hebephrenia. He agreed with Dr. Drapes to a certain extent, but thought that when a definite series of symptoms were found to arise in a certain number of cases it was perfectly legitimate as well as convenient to give them a name. Hebephrenia did not include all the insanities of puberty or early adolescence, and it differed from paranoia in its marked tendency to dementia and in the temporary character of the delusions. As to the possibility of recovery, it was stated that about 8 per cent. recover, though in many of these some mental impairment was left. In some other cases the disease was arrested at a certain point, but in the vast majority of cases it progressed to the utmost degree of dementia compatible with life.

A Case of Thoracic Aneurysm simulating Mediastinal Growth. By ROBERT PUGH, M.D.Edin., Assistant Medical Officer, Claybury Asylum.

H. B—, æt. 45, single, occupation porter. He was admitted to Claybury Asylum on June 6th, 1899, suffering from mild secondary dementia.

Family history.—Father died insane; mother alive and healthy; one brother alive and healthy.

Personal history.—Patient was born and has always lived in London. He had a severe attack of rheumatic fever when a boy at school; shortly after this he developed chorea, and since that time has suffered from choreic movements of face, arms, and legs. Ten years ago he contracted syphilis.

Certificate.—He has no sense of decency; is dirty in his habits; eats out of the refuse pail; fills his pockets with all kinds of rubbish; and steals everything he can get hold of.

Physical condition.—Is poorly nourished; has numerous pigmented scars across loins and both legs; varicose veins of both legs; first cardiac sound impure; lungs healthy; pupils unequal, right dilated; light reflexes sluggish; knee-jerks exaggerated; speech slurred; muscular movements jerky and inco-ordinate.

Mental condition.—His intellect is weakened; he is slow in answering questions and stupid in his general behaviour; memory much impaired; his general condition is somewhat suggestive of general paralysis.

Progress of case.—September 8th, 1899.—Patient is practically unchanged mentally, but probably some slight progress has occurred in his dementia, as his choreic movements are much less marked.

August 5th, 1900.—He is vacant and childish; articulates badly; rambles foolishly in his remarks. He is slovenly in his dress and habits, and takes little interest in his surroundings.

October 14th, 1901.—This morning patient was noticed to be suffering from some respiratory trouble; respirations 24, very laboured; face blue. On being sent to bed it was found that the superficial veins of the chest were much enlarged and engorged. There is a systolic bruit in mitral area; and a deficient air entry into the left lung. Breathing is bronchial, with coarse sibilant râles. Patient had five of these attacks, which were characterised by orthopnoea and by distension of the superficial veins of the chest. He died in the fifth attack from hæmorrhage.

Autopsy.—Is fairly nourished and somewhat muscular.

Syphilis.—There is marked bronzing of both shins, associated with former ulceration; the scars are multiple and serpiginous; the glands in the groins are shotty, and there is a scar on the middle of the dorsum of the glans penis. The right pupil is 5 mm., the left 4 mm.; the skull-cap is dense. *Dura mater* natural; great excess of subdural fluid. *Pia arachnoid* opaque and thickened in the fronto-parietal region; on the under surface and the lower temporo-occipital region it is less thickened—the whole membrane is œdematous and strips readily, and there is considerable excess of subarachnoid fluid. The vessels at the base are apparently healthy, and the sinuses are empty. Encephalon, 1190 grms.; right hemisphere, 495 grms.; left, 500 grms.; cerebellum and pons, 160 grms. There is considerable prefrontal wasting, and rather less wasting in the remainder of the fronto-parietal region and the first temporal convolution; it is less marked elsewhere. The lateral ventricles are dilated and a little granular; the choroid plexus is cystic; the fourth ventricle is natural.

Thorax.—The nose is natural, but full of blood. There is a little recent adenitis of the cervical glands. The right pleura contains half a pint of fluid; there are slight apical adhesions; the median aspect of the upper lobe of the lung, and to some extent of the middle lobe, are adherent to the aneurysm referred to below. The left pleura is natural, except for rather more marked apical adhesions. The bronchi are congested; the bronchial glands below the bifurcation of the trachea are large and fibrous (syphilitic). The right lung weighs 1028 grammes; the lower lobe is œdematous, and contains areas of grey hepatisation; the middle lobe is broncho-pneumonic, and the upper lobe is œdematous. Many of the bronchioles of the lower lobe contain pus. The left lung weighs 920 grammes; it is œdematous throughout, and the lower lobe is also broncho-pneumonic. The pericardium contains two and a half ounces of fluid; the heart is wasted, but the muscle is firm; the left ventricle is slightly hypertrophied, the coronary arteries are moderately atheromatous, the valves are natural. The arch of the aorta is hugely dilated and typically syphilitic, being covered with pearly white fibrotic patches. At the junction of the ascending and transverse parts of the arch on the posterior wall is a cavity nearly two inches in diameter which opens into a false aneurysm, the sac of which is rather smaller than a goose's egg in size. This aneurysm lies antero-posteriorly, and it is compressed laterally. The right pulmonary artery lies below, and the right bronchus behind. The superior vena cava

lies on the outer wall of the aneurysm, and is much flattened and constricted, its circumference, two inches from the auricles, measuring barely half an inch. The trachea lies behind and to the right. The aneurysm has ruptured through the anterior wall of the right bronchus at its union with the trachea; the opening is a ragged, transverse slit, more than an inch in length, and from its appearance necrosis must have taken place owing to the pressure of the aneurysm; all the neighbouring part is blackened and necrosed. The aperture from the sac of the false aneurysm lies at its lower and median part, and consists of a transverse slit about three eighths of an inch in length. The superficial venous distension which was such a marked feature of the case during life is not now visible, but on slitting open the various veins their large diameters can at once be seen. There is no evidence that the aneurysm has compressed any of the thoracic nerves.

Liver, 1515 grammes, congested and somewhat friable.

Spleen, 155 grammes, is very pulpy, but the connective tissue is increased.

Kidneys, 128 grammes each, congested; cortex, 627 mm.; density natural; a little fatty change. Renal arteries are somewhat thickened; there is a little early atheroma of the abdominal aorta.

The glands around the coeliac axis are very calcareous. The stomach contains a large amount of blackened blood; the small and large intestines are natural; the bladder is hypertrophied.

Cause of death.—Immediate: hæmorrhage from trachea. Rupture of a false aneurysm, secondary to a true aneurysm of the upper half of the ascending part of the arch of the aorta into the right bronchus, near its union with the trachea. Other pathological conditions: systemic syphilis, insanity with marked dementia.

The essential feature of the case was the extreme distension of the superficial veins of the chest. This was so extreme that in the absence of any definite sign clearly pointing to an aneurysm, it was impossible to definitely determine whether the patient was suffering from a thoracic aneurysm or from syphilitic affection of the mediastinum and its glands.

A Case of Status Epilepticus complicated with Scarlet Fever. By GEORGE WATTERS GREENE, B.A.Cantab., M.R.C.S., L.R.C.P.Lond.; Assistant Medical Officer, Claybury Asylum.

M. L.—, a lad of seventeen, was admitted into the asylum on October 20th, 1902, with a history of epilepsy.

On admission he was pale, weak, and exhausted, but was slowly regaining strength when on November 1st he suddenly commenced with a succession of thirty-six fits. Two days later he had another succession consisting of seventy-three fits, and on the same day he developed an attack of scarlet fever. His temperature rose to 102.5° , and remained about that level or a little lower for several days. He had a bright red erythematous rash over the body, and the tonsils were inflamed and slightly ulcerated. Meantime the fits continued with increased severity, averaging from one hundred to two hundred a day. On November 18th the succession of fits ceased. They had amounted in all to a grand total of 1742, extending over a period of seventeen days. After the subsidence of the fits the patient became very feeble and collapsed. His temperature sank to 95° , and remained between that level and 97° for nearly a fortnight. His heart dilated, and the radial pulse was scarcely discernible. However, with digitalis and alcohol (whisky) the patient rallied. The former was administered in 5-minim doses every four hours, and the latter in half-ounce doses also every four hours. This treatment was continued with a few short remissions until December 24th, during which time the patient slowly regained strength, and at the end of that time was able to get up.

He was practically recovered when, perhaps, the most interesting feature of the case occurred. On January 1st he developed peripheral neuritis in both legs. There was pain on pressure, marked atrophy of calf muscles, foot-drop, absence of knee-jerks, and, later, of electrical reaction, and complete inability to walk or stand. The arms and hands were also somewhat affected, and unequally. The grips of the dynamometer show forty in the left hand and seventy in the right. There was anæsthesia in both legs, and more marked on the peroneal distribution. There was no marked anæsthesia in the hands and arms, although reaction was slightly retarded. Muscular pain was present on pressure in the legs. There was no characteristic mental reaction as accompanies alcoholic neuritis. The question to be answered is, what was the cause of this neuritis? Three factors were capable of producing it. Firstly, it might have been post-scarlatinal; secondly, post-epileptic; and finally, alcoholic. Of these post-scarlatinal seems most probable, as the fact that alcohol (whisky) was administered in moderately small doses for a period only extending a little over three weeks, and the duration of the neuritis was longer than is usual in post-epileptic cases. He is now, February 18th, quite recovered. He has gained considerably in weight, looks robust, and seems in perfect health. The fits also have entirely ceased.

Remarks.—As stated by Percy Smith,⁽¹⁾ Korsakoff, of Moscow, was the first to call attention to the fact that a special form of mental disorder which had previously been described as being typical in alcoholic cases, and was commonly associated with multiple neuritis, might also occur in cases where there was no history of alcoholism, but where there was polyneuritis from other causes. Dr. Robert Jones has seen three cases of

asylum dysentery in whom peripheral neuritis occurred in both legs, and in whom there was analgesia and diminished electrical response. He has also recorded cases of lead insanity with neuritis, for whom the electric bath treatment was applied. Tiling, of Riga, quoted by Smith, suggests that polyneuritis might result from loss of blood, puerperal toxæmia, auto-intoxication, metallic poisoning, and other causes. Cases of typhoid fever with the condition referred to have also been described, but the amnesic mental condition of alcohol was not present. Whether a "polyneuritic psychosis" really occurs in association with multiple neuritis and characteristic of it appears unsettled. Kraepelin suggests that the mental disturbance in these cases is not due to the neuritis, but to the effect upon the brain of the same agent which had affected the peripheral nerves. In the case above described the peripheral changes were very marked, but there was no co-existing or characteristic mental condition.

(¹) "Peripheral Neuritis and Insanity," *Brit. Med. Journ.*, August, 1900.

Occasional Notes.

The English Archives of Neurology.

The second volume of the *Archives of the Pathological Laboratory of the London County Asylums*, edited by the director, Dr. Mott, very fully justifies the hopes, that were expressed at the establishment of the laboratory, of most important help in the advancement of psychiatric science.

This volume is a monument of the vast amount of clinical and pathological matter that is at the service of Dr. Mott and his able coadjutors; of the huge amount of work achieved in the laboratory, as well as of the careful critical faculty and great ability in lucid exposition possessed by the editor and principal contributor.

The relation of syphilis to general paralysis, which Dr. Mott has, from the outset of his work, steadily pursued, is still the leading subject. Dr. Mott devotes an article of over three

hundred pages to the exposition of his views that general paralysis is etiologically identical with tabes dorsalis. His views are supported by valuable papers from Dr. Joseph Shaw Bolton and from Dr. George A. Watson.

Dr. Bolton also deals with the morbid anatomy of mental disease in general, and Dr. Tredgold treats of the importance of alcoholism and tuberculosis in the production of idiocy and imbecility; and there are other papers of the utmost value and importance.

These various contributions will be dealt with in reviews, and we can only draw the attention of our readers to the great importance of this work.

At last it may be said, without undue exaltation, that England possesses a school of neuro-pathological research which need not fear comparison with the best of its Continental contemporaries; and it must not be forgotten that this is due to the liberal public spirit of the London County Council and to the broad-minded initiative of our medical *confrère*, Sir William Collins.

The Family Care of the Insane.

Our honoured foreign colleague and associate, Dr. Jules Morel, Physician and Director of the State Asylum at Mons, has, in the Belgian retrospect which appears in this number of the JOURNAL, given an account of the sessional work done at the meeting of the International Congress for the Care of the Insane held in Antwerp, September 1st to 7th, 1902. It was a notable meeting of a notable body. Belgium has been ever remarkable for the work done at Gheel, and since the foundation in recent years of the new colony at Lierneux these two institutions have been the main attraction which that country has offered to those who are practically interested in the care of the insane. At the meeting in last September the question of family care was naturally the main topic, the thread round which hung all the discussions. What has been done in this direction met with the enthusiastic and almost unanimous approval of the alienists who were present, and many proposals were considered for extending and widening the application of

the principle. But though the influence of the *genius loci* kept this special topic in the forefront, few matters of interest to asylum administrators were left untouched. The question of whether institutions for the insane should be directed by physicians or by laymen has practically little interest in England and Scotland, having long passed beyond the region of discussion. The training of attendants, owing to the exertions of our Association, may be said to have reached the same stage. Unfortunately we are not as far advanced in the question of providing special diplomas in psychiatry for physicians. Organised and general after-care cannot yet be considered to be within the range of practical endeavour, in spite of all that has been done to bring it under public notice and of the efforts that are being made in individual cases.

The numerical strength of the medical staff required in an asylum is still a burning question elsewhere than in England. We note with satisfaction that the Congress adopted the estimate made long ago by a great Belgian clinical physician, Guislain, and laid down that there should be one resident medical officer for every hundred patients in a public asylum.

Many other topics specially interesting to us just now were discussed—the prevalence of phthisis among the insane, the need for proper laboratories in asylums, the best method of dealing with early cases with safety to patients and yet without too much official intervention, etc.

Socially the Congress was a distinguished success. The Belgian Minister of Justice was Honorary President, and the Vice-Presidents included two former ministers of justice and a former minister of foreign affairs. An admirably organised trip to Gheel, under the management of our esteemed *confrère*, Dr. Peeters, was followed by an excursion to Lierneux, where the members were met by Monsieur Pety de Thozée, Governor of the Province of Liège, who has always taken the warmest interest in the colony, and by Dr. Depéron, the physician to the colony. While Gheel counts nearly as many centuries as Lierneux counts years in the care of the insane; while Gheel lies in the flat and naturally arid Campenland, and Lierneux is beautifully situated among the Ardennes not far from Spa; while the language of one is Flemish and the other is Walloon; the success that attends both seems to show that family care

does not require very special circumstances for its inauguration. Up to the present in English-speaking countries, with, of course, the remarkable exception of Scotland, the domestic care of the insane has attracted little attention. It is quite possible, however, that before long the increasing tax imposed by the maintenance of the insane may, through the operation of economic considerations, bring the question to the front even in rich countries. It is remarkable enough that although many of the most eminent alienists of France, Germany, Austria, Italy, Holland, Russia, and Scandinavia contributed to the proceedings, the only papers from the United Kingdom were those of Mr. Spence and Dr. Macpherson, dealing with Scotch statistics; and we are informed the English-speaking persons attending the Congress barely reached a Greek plural, if we omit the Chinese Ambassador at Brussels, who was present at all the meetings and followed the work with much interest, but, save as regards the too brief English portion, with the aid of an interpreter.

The Treatment of Incipient and Unconfirmed Insanity.

The possibility of early legislation on this subject, and its inherent importance, must be our excuse for again reverting to it, with no intention of anticipating the discussion on the papers of Drs. Ernest White and Outterson Wood, at the May Meeting.

These papers have brought out so strongly the evils of the present condition of treatment consequent on the incapacity of many who undertake it, that the fear naturally arises whether the Lord Chancellor may not delay the passing of the clause until some plan has been formed for safeguarding its action.

Delay, however, would be greatly to be deplored, and a little consideration will show that the operation of the clause, even as it stands, would go far to remedy the abuses now existing.

The danger of prosecution, under Clause 315 of the existing Act, is without doubt a great deterrent to all persons of standing or reputation from undertaking the treatment of any cases in which mental disturbance is present. The result is

that much of such treatment goes to those who have little to lose by prosecution. The persons well qualified are debarred, whilst the unqualified are encouraged.

The notification to the Commissioners in Lunacy, provided for in the Lord Chancellor's clause, would go far to remedy and reverse this state of things. The possibility of inquiry would make the friends of patients more careful as to the qualifications of those to whom they committed the care of their friends. On the other hand, the persons who really possess experience and qualification for the work would be encouraged, and this would tend to exclude those who are unqualified.

To safeguard the working of the clause, therefore, some qualification of the persons undertaking such treatment should be necessary, but this will require consideration and experience.

The Commissioners in Lunacy in the working of the clause would no doubt soon arrive at conclusions which would enable them to frame regulations in regard to the qualifications necessary for the efficient care of the incipient insane, and to exclude those who were manifestly incompetent.

The suggestion may therefore be made, to enable the clause to be at once passed as law, that a section should be added enjoining the Commissioners in Lunacy to frame recommendations to the Lord Chancellor in regard to the qualifications required of those undertaking the care of unconfirmed mental cases.

Care of the Chronic Insane in Ireland.

A short time ago (March 20th) a meeting was held in Dublin of a society called the Irish Workhouse Association. We are not in a position to say whether the proceedings have been very fully reported or not. We should hope not ; and we must observe that this seems very probable since we find that one reverend gentleman remarked, evidently in a spirit of *scæva indignatio*, that the Christian treatment of the poor was not an "urgent" question, that term being reserved for something connected with the licensing trade or the labour interests. We observe, however, in the proceedings as reported, that curious kind of incoherence that so often perplexes the foreigner

who tries to comprehend the lines on which Irish public business is conducted. People seem to have adopted the odd plan of addressing the meeting either by letter or by speech on all sorts of topics, whether such were exactly on the programme or not, or whether the persons who spoke or wrote had or had not any accurate information. There did not appear to be perfect unanimity of feeling as to the present management of Poor Law business. One member stated that he believed the Irish Poor Law Guardians to be actuated by a high sense of duty. On the other hand, an eminent physician stated that not politics nor religion (which are commonly said to rule everything in Ireland), but contracts governed the workhouses; and nobody contradicted him. Perhaps the two statements are reconcilable, high sense of duty meaning duty to one's favourite contractors. It is comforting to think from the speech of the Chairman of the Society that that body seems to think workhouses (even conducted under a high sense of duty?) are not suitable places for the insane. On the other hand, an eminent ecclesiastic, whose views were made familiar to us through a paper read at the Cork meeting in 1901, wrote triumphantly of the success which he foresees for his efforts towards the establishment for the chronic and harmless insane of auxiliary asylums not under medical control. Those who have any knowledge of the condition of the insane in the Irish workhouses at present will hesitate before they endorse this scheme, since it seems to offer no guarantee that the supervision in the new auxiliary will not be less than in the old workhouse. However, merely from the point of view of the workhouse reformer, it would no doubt be a "reform" to get rid of the insane.

Some loose talk was indulged in as to the cost of asylums. It is a favourite device to contrast the charges now made by the asylum committees with those made a few years ago. At that time the rate in aid was paid direct to the asylums, and the cost of repayment of loans for building, etc., was met in such a way that a claim on foot of this did not appear in the demand made by the asylums on the counties. Now the demand includes money for repayment of loans and does not credit the asylums with the rate in aid, which is paid by Government direct to the county councils. It is consequently easy to show that the present gross cost is very much greater than the former net cost, though it is not easy to see what is

gained by representations of this kind, nor by reckless statements as to increase in the rates. But asylums in Ireland are very unpopular institutions, and any stone will do to throw at a dog. It is curious, by the way, to observe that the notion of boarding out the insane never seems to occur to the reformers and economists in Ireland. Is this due to the ancient dread of lunacy still existing there, or to mere ignorance of such a method, or to "a high sense of duty" lest the insane might be neglected, or have "contracts" anything to do with it? We are left in a distressing state of uncertainty on these and many other interesting points.

Clinical Cases.

The cases of clinical interest in our asylums must be very numerous, and there can be no doubt that much valuable information is buried in asylum case-books with little hope of ever reaching the notice either of the specialty or the profession.

Striking pathological and symptomatological variations are the most attractive for reporting, but new departures in general treatment and special drug therapeutics are also of great importance. The negative results of the latter are even of more value than the positive. If a drug produces favourable effects these are almost certain to be published at once, whilst the failures only reach publicity much later. Hence arise misleading first impressions of the nature of a drug, which are long in being corrected. In this direction, therefore, there is a valuable opening for clinical effort.

The number of clinical cases recorded in this JOURNAL can be but a fractional proportion of what might be with advantage supplied from the vast material of our asylums. Medical superintendents, and especially the secretaries of divisions, would be doing good work in urging the junior members of the Association to undertake clinical reporting. Careful work of this kind is the very best foundation of medical character, and this has never been more thoroughly demonstrated than in the career of that eminent clinician, Dr. Hughlings Jackson.

The value of this JOURNAL would certainly be greatly increased by a very considerable extension of the number of carefully reported clinical cases, while many junior physicians

in making such contributions would be laying the foundations of future literary and scientific reputation

Report of the Tuberculosis Committee.

The Derby meeting of the Association did not pass without reference to the unfortunate report of the Tuberculosis Committee. The President explained that the whole matter had been considered by the Council, that they had obtained the opinion of an expert of the highest eminence, and that it was desirable to proceed further in order to have the statistics corrected and published in this JOURNAL. As we have previously indicated, the errors in these statistics do not vitiate the important conclusions set forth by the Committee. Of that the Council has been definitely assured; and, as Dr. Yellowlees remarked, it is the duty of the Council to protect the honour and dignity of the Association. The whole of the materials accumulated and dealt with by the Tuberculosis Committee in the production of their Report will be submitted to a searching expert inquiry, and the results will be made known. Nothing less could be regarded as satisfactory in the circumstances; the members of the Committee are just as desirous of having mistakes corrected as the Council or the Association at large. The Chairman of the Committee has taken a course which is absolutely unassailable; having consulted with the members of his Committee, he laid the matter before the Council and gave every possible assistance towards the amendment of the errors into which the Committee fell. We may therefore await with confidence the result of these deliberations.

The resolution proposed at the meeting, if successful, would have had the effect of a finding of no confidence in the Council, and it was consequently very properly, promptly, and decisively rejected.

The Colney Hatch Fire.

The suffocation of fifty insane persons, as the result of a fire in an English asylum, constitutes a tragedy that might

have been hoped to be impossible. Yet, despite the magnitude of the loss of life, there is much reason to be thankful that it was not greater.

The Commissioners in Lunacy for many years past have exerted themselves strenuously and with unceasing vigilance to render all buildings receiving the insane as nearly fireproof as possible. They have most rigorously insisted on structural means of escape, and on most elaborate provisions of all means and appliances for the extinction of fire. The result of this long-continued care is that asylums are probably better protected against fire than any other public institutions.

The inflammable character of the buildings in which the disaster occurred is therefore in direct antagonism to the principles of construction which the Commissioners have habitually demanded.

The explanation of this exception is not far to seek. At the time of the construction of these buildings the London County Council were greatly pressed for accommodation for their patients, and in their efforts to provide it there is every probability that the principles of the Lunacy Commission were overridden. This, however, could not have been accomplished without the aid of the Home Secretary of that period.

The finding of the jury blamed the disastrous construction equally on the London County Council, the Home Secretary, and the Lunacy Commission.

The above considerations, however, lead to the conviction that the latter body is not culpable, and that the blame really attaches to the Home Secretary and the London County Council. This latter body has done such good service in the care of the insane that their share of the blame should speedily be forgotten, especially in face of the strenuous efforts that are being made to render the recurrence of such a calamity impossible.

The silver lining of this dark cloud is furnished by the splendid behaviour of the asylum staff, from highest to lowest. The searching inquiry of the jury failed to elicit the smallest failure on the part of the staff, but proved, on the contrary, that all concerned had, with self-sacrificing courage and devotion, efficiently performed their duty.

The After-care Association.

The Annual Meeting of this Association was held at the house of Sir William Church, the President of the College of Physicians, who presided.

The report shows a steady annual increase in the number of cases assisted, but the increase in the subscription list is less satisfactory.

The speakers, among whom were Drs. Claye Shaw and Robert Jones, bore testimony to the valuable work of the Association in the prevention of relapse in recovered patients, and the suggestion was made by Dr. Rayner, in view of the good results of the work, that it might well be called the Association for the "Prevention of Insanity by Relapse."

The statistics as yet are not of sufficiently long standing, or of sufficient extent to yield any definite results, but there can be little doubt that, as time passes, the asylums which most largely avail themselves of this aid for their recovered patients will have the satisfaction of recording a considerable reduction in the number of their relapsed cases.

Tent-life for the Insane.⁽¹⁾

The tent-cure of the tuberculous insane, inaugurated in June, 1901, by Dr. A. G. MacDonald at Manhattan, was found so successful that in July of the same year it was tried for filthy and demented patients, also with most strikingly satisfactory results.

Increased appetite and assimilation were universal in the demented, who in many cases improved in their habits, and the tuberculous showed marked improvement. This mode of treatment is also to be tried on convalescent patients.

The tent-life in New York State is apparently carried on for only three or four months, but in our more favourable climate it might probably be continued throughout the summer. When St. Thomas's Hospital was at the Surrey Gardens some of the patients were accommodated in tent wards during the larger part of the summer. It is to be hoped that this new departure in treatment will be tried on this side the Atlantic.

Until other accommodation can be made for the tuberculous insane it would be a great advantage to these patients, and would for several months of the year relieve the non-tuberculous patients from the danger of infection to which they are now unavoidably exposed.

The treatment of the demented in this way during the summer months might also avoid and mitigate some of the special intestinal disorders to which they are prone.

The greatest advantage, however, would probably accrue in the treatment of convalescent cases.

(¹) *American Journal of Insanity.*

Reception-house and General Hospital.

A reception pavilion in connection with the General Hospital has been established at Albany (N.Y.), and appears to be doing very satisfactory work.

The Edinburgh Infirmary Reception Ward is not yet constructed, but the rumour has reached us that patients are being received in the existing wards.

The Sligo District Lunatic Asylum.

At the monthly meeting of the Committee of Management of this asylum, as reported in the *Sligo Independent* of February 21st, we find the opinion expressed by one of the members of that body that "the attendants were perfectly right to use a certain amount of violence in order to keep proper discipline amongst the inmates." This expression of opinion arose on a discussion on a sworn inquiry, held by a Lunacy Inspector, as to the alleged ill-treatment of an inmate by two attendants. The Inspector stated that the patients "gave evidence under evident fear of the consequences their action might entail." A letter was read from a number of attendants denying any terrorism, and this was apparently accepted as disproving the Inspector's statement. The Inspector having admitted that the two accused attendants could not, on the evidence obtained, be

convicted in a court of law, the Committee, after declining the invitation of their chairman to ask the opinion of the Medical Superintendent, exonerated the two attendants from all blame.

If the facts are correctly reported there can be little doubt that the maintenance of discipline in the Sligo Asylum is an impossible matter, and that sooner or later "regrettable incidents" will occur in that institution. Ill-treatment of inmates must inevitably occur in an institution in which the attendants are encouraged to use "a certain amount of violence," in which charges of terrorism by an independent official are held to be refuted by the simple denial of some of the accused parties, and attendants are entirely exonerated under conditions of the very gravest suspicion,—where, in fact, a majority of the governing body shows a marked bias in favour of the attendants, rather than a desire to protect the patients.

In 1901 an attendant of this asylum, who had assaulted a patient, was recommended for dismissal by the Lunacy Inspectors, but the Committee decided only to caution him. This man was, however, prosecuted before the magistrates for assault, and imprisoned for two months.

Irishmen are so universally recognised as siding with the weak and suffering that this perversion of the national characteristic must have an explanation, and this is to be found in "politics." In spite of St. Patrick the trail of the political serpent is over it all. Committees are only anxious to exercise to the full their unlimited power and patronage, and have not grasped the duties and responsibilities devolving upon the managers of asylums; nor do they appear to have fully realised the object with which those institutions have been founded.

The Spirit World.

The pages of a spiritualistic contemporary afford a great amount of seriously stated information in regard to existence in the spirit world, which is almost as interesting as that which we are accustomed to receive from our patients.

There appear to be a number of bad spirits who often use bad language and give misleading information (through the usual planchette and other channels), and even personate other spirits, with intent to deceive. It is interesting to learn that one such bad spirit, by communication with a spiritualistic lady, had become quite a reformed character. This is most satisfactory, since from the police and law reports many have formed the opinion that the spirits had rather a pernicious effect on the characters of those who were in frequent communication with them, and were not generally likely to benefit by their friends in the flesh.

This reformed spirit, as a reward, asked the lady to bestow on him a "spirit dog," one of several of whose existence she had been unaware. Of course, if there are spirit dogs there must be spirit cats; and if they are not reformed! And if spirit dogs and cats, why not pigs and sheep? Imagine the spiritual property of a Chicago pork-butcher, or an Australian mutton millionaire!

This amusing publication has yet its pathetic side, when we deduce from its considerable circulation the large amount of potential lunacy that it connotes.

Licensing (Scotland) Acts Amendment Bill.

This Bill, now before Parliament, is practically a repetition of the last English Act. In approaching the subject, however, the authors of the Bill have had to make certain alterations to bring it into conformity with the law of Scotland as already existing. The clauses relative to separation of married people who have become habitual drunkards have been omitted in the Scottish Bill; but the constitution of licensing courts and of licensing law is generally amended. Additional penalties are imposed for offences involving drunkenness, and the black list will be extended north of the Tweed. Much-needed reforms in regard to the registration of clubs are introduced, and it is to be hoped that these will pass into law without delay. There are other matters to which we have repeatedly referred as requiring amendment in connection with drunkards and their doings; and it is to be hoped that amend-

ments will be made in the course of the Parliamentary discussions to render this Act still more effective.

The Derby Dinner.

The dinner held after the quarterly meeting was well attended, and a very happy evening was passed. Colonel Gascoyne's speech was duly appreciated after the visit to the County Asylum. He said that the Committee had great confidence in Dr. Legge, who had done so much to bring the old institution up to date; but their unhappy experience was that the County Council were always backward in granting large sums of money. Still, they had to consider that they were providing for a small town—a town which brought nothing back to the ratepayers in hard cash. No doubt that is the average unenlightened view of the County Councillor who does not serve on the Asylum Committee, but our recollection of Mickelover is that much money has been judiciously spent, and that, irrespective of humanitarian considerations, there is a recovery rate which shows that many patients are annually restored to usefulness and thereby rendered self-supporting.

The hospitality extended to the Association by Dr. Legge and his Committee was very pleasing to those interested in the welfare of the Association and desirous of promoting its aims.

Part II.—Reviews.

Sinnesgenüsse und Kunstgenuss [The Pleasures of the Senses and of Art].

By CARL LANGE. Wiesbaden: Bergmann, 1903. Pp. 100, large 8vo.

PROFESSOR LANGE has left a reputation that will not soon be forgotten, not only in the medical annals of Denmark, but as one of the founders of the much-discussed James-Lange theory of the emotions. The possibility of applying such a theory to the explanation of the æsthetic emotions was fairly obvious, and in 1894 Professor Sergi, in

his subtle and suggestive book, *Dolore e Piacere* (translated into French as *Les Émotions* and reviewed in the JOURNAL last year), tried to show how æsthetic emotions may be regarded as having a physical basis of muscular, vaso-motor, and visceral character. We are told that Lange himself had long taken great interest in art (and it may be added that his brother is a well-known historian of art), but it was not until the last few years of his life that he undertook to write the present book, which he left incomplete at his death from angina pectoris in 1900. In its present translated form it has been edited, revised, and abbreviated by Dr. Hans Kurella, who had long known Lange, and it appears in the excellent series of *Grenzfragen des Nervenund Seelenlebens*.

While all that Lange wrote is deserving of study, it can scarcely be said that the present book can be placed on the same level as his earlier book on the emotions, and we miss the detailed analysis of emotional states in which Lange showed so much skill. The first part, which deals with the general physiology of enjoyment, is decidedly better than the second part, which is concerned with various arts. From the psycho-physiological standpoint Lange divides the methods of enjoyment into three groups—(1) those which work along nervous channels, such as the pleasure of sight and sound, and only influence the vascular system secondarily; (2) those which chemically affect the blood, like tea and alcohol; (3) those which mechanically influence the circulation, like dancing. Joy he defines as “the perception of a general vascular dilatation in association with a heightened motor innervation and a resultant feeling of greater strength and facility.” No reference is made to the experimental investigations which have tended to throw doubt on the constancy of the association between pleasure and vascular dilatation. There are some very interesting pages on ecstasy, which Lange regards as the purest and most uncomplicated condition of enjoyment, and on its physiological mechanism.

Lange's theory of art is embodied in a very simple formula; the two great tasks of art, and its two factors, are change, and sympathetic emotional excitement. The second part of the book is concerned with the application of the formula to decoration, painting, poetry, and the stage. One cannot help feeling, however, that this formula is somewhat bald and general, and that it leaves very much in the sphere of art unaccounted for. It is not even new; so early a philosopher as Aristotle recognised the æsthetic importance of perpetual slight novelty, while the physiological excitement to which Lange attaches so much importance is submitted to no detailed analysis. Moreover other workers in the same field are entirely ignored; there is no reference even to Sergi, and the psychologists in Germany, such as Lipps and Groos, who are doing so much to elucidate these complex problems, do not exist for Lange. While definite applications of the theory are rarely introduced, when they do appear the facts are not always exact; thus it is a mistake to speak of the Mas-d'Azil epoch as contemporary with the reindeer, which had then retreated to the north, and it is of course wildly incorrect to say that “the earliest generations of men” were acquainted with the potter's art.

Criticism is, however, disarmed by the pathetic reference in the last sentence to the author's failing strength, and it may truthfully be said that,

though the problems of æsthetics have not here been placed on a new level, or even been enriched by a really novel contribution of importance, Lange's firm grip of the psycho-physiological basis of art renders this little book very suggestive and illuminative to the large number of people who are interested in these questions. Dr. Kurella has been well inspired in bringing it before a wider audience than it could possibly reach in its original Danish form.

HAVELOCK ELLIS.

La Volonté. By F. PAULHAN. Paris: Doin, 1903. Pp. 323, 8vo. Price 4 frs.

The author of this new volume in Dr. Toulouse's International Library of Experimental Psychology is well known as an able representative of that typically French group of psychologists of whom Professor Ribot is the best known and probably the most accomplished member, if, indeed, he may not be regarded as the master of the school. This group stands equally aloof from the old metaphysical schools of psychology, which sought to force abstract systematic explanations on the complexity of psychic events, and from the very modern schools, which apply the strict methods of physical science to psychology. While in sympathy with the methods of science, and comprehensive in their collection of data, they rely mainly on description, introspection, and analysis. In many fields, not yet ripe for more precise investigation, such a method yields the best results we can hope for, and it is a method in which the special qualities of the French mind—its lucidity and critical discrimination—appear to good advantage.

Such a subject as the will easily lends itself to this treatment, and the author of this book, who has published previous books on closely allied subjects, more especially on mental invention and on character and its varieties, here finds himself at home. He discusses the various stages in the evolution of the will from automatic acts, writes suggestively on caprice as a preliminary unformed stage of will, studies its relationship to other psychic conditions, and its physiological and social connections. "It is essentially," he concludes, "a new and active synthesis. But it is always mixed with automatism, and also with suggested activity, just as invention is always mixed with routine and with imitation. Its part in mental life seems at once much larger and much smaller than has generally been believed." The function of the will is to remedy the insufficiency and the conflicting tendencies of automatism, and at the same time to prepare a higher automatism.

It is characteristic of the author's treatment, and also of the tendency of psychological thought, that nothing is said in the body of the book concerning the question of free-will. A brief appendix is, however, devoted to this subject. The author here observes that this question had not appeared to present itself at any point in the course of his study of the will. He has certainly postulated determinism, but a partisan of indeterminism may easily accommodate himself to all that he has said. Everyone is responsible, he argues, up to a certain point; no one is

responsible in any absolute sense. "Freedom is a relationship between the different elements of the self," and the difference between an act that is free and one that is not free is not the difference between an act that is indetermined and an act that is determined, but the difference between an act that is the result of an unsystematised determinism and one that is the result of systematised determinism. The theory of indeterminism, he concludes, has little bearing on the theory of the will, the connection being merely due to an ancient confusion between indeterminism and freedom, so that in psychological as in physical science it is reasonable to accept determinism.

The subject of the will no longer possesses the acute importance which it had for all in the days when psychology was ruled by metaphysico-theological conceptions. But it still has its interest, and not least to the alienist, who from time to time finds the ancient metaphysico-theological conceptions flaunted before his eyes. The present volume will be found helpful and suggestive by those who wish to attain a clear view of the present attitude of thinkers towards the subject—all the more so, perhaps, because it is written without thought of medico-legal applications. The style is throughout simple and pleasant.

HAVELOCK ELLIS.

Manuel de Psychiatrie. By J. ROGUES DE FURSAC. Paris: Alcan, 1903. Pp. 314, 8vo.

To write a handbook of psychiatry nowadays is a very much more serious task than it was thirty years ago. The wide extension of the outlying provinces of morbid psychology, the need of taking into account the methods of normal psychology, and the growing tendency to regard abnormal mental conditions as the outcome of general somatic conditions, alone combine to render a brief magisterial discussion of the vast field so complex a task that even the youngest and most omniscient alienist may well feel appalled. There are, however, still two ways in which even a man who is not endowed with a special genius for this task may yet hope to accomplish it with fairly interesting results. That is, he may either after long experience summarise the results of his own personal observation and knowledge in such shape as may seem best to him; or else, at an earlier stage in his career, he may seek out the best that is known and thought in his time, and rely on the masters he has chosen to follow rather than on his own experience. The first method has the disadvantage that it may tell us nothing about the general tendency of contemporary psychiatry, but on the other hand it cannot fail to contribute instructive and useful observations; the second method has the disadvantage that it may yield nothing of original value, but on the other hand it may furnish a valuable indication of the contemporary trend of psychiatry.

The present volume evidently belongs to the second class mentioned. The name of Dr. Rogues de Fursac seems unfamiliar, but he easily allows us to place him. He is a pupil of Joffroy (to whom the book is

dedicated), and he adopts almost without modification the classification of Kraepelin, to whom he frequently refers with admiration. Throughout he presents us with the combined teaching of these two masters.

The book is divided into a shorter part dealing with general psychiatry, and a longer part devoted to special psychiatry. The first part discusses etiology, general symptomatology, and general methods of treatment. In the second part the various forms of insanity are discussed, Kraepelin being followed in all main outlines. The chapter on general paralysis may be referred to as showing the author at his best; the present position of knowledge and opinion in regard to this subject is set forth in a comprehensive, methodical, and precise manner, and a judicious attitude is taken on the much-debated question of etiology; with Joffroy, Näcke, etc., the author emphasises the importance of neuropathic (not psychopathic) heredity as a predisposing cause of the disease, and among the exciting causes syphilis is regarded as "the most important and *perhaps* as essential." While thus admitting the great importance of syphilis in the etiology, the author concludes that we are not entitled to affirm (with Fournier and others) that general paralysis is a syphilitic disease. He suggests that it may perhaps constitute a syndrome which various causes may suffice to evoke, and that possibly we ought to speak of general paralyses rather than of a single general paralysis. As might be anticipated, dementia præcox is dealt with fully, under three forms: simple, katatonic, with delirium. Two chapters are devoted to alcoholism and two to the auto-intoxications, including myxœdema and cretinism. There is a (somewhat perfunctory) discussion of sexual perversions, in which inversion is regarded as always congenital, and also of obsessions, both under the head of constitutional psychopathics; while chapters are devoted to epilepsy and hysteria.

It will be seen that the author covers his large field in a fairly comprehensive manner, though at places the treatment is thin. He shows a fairly wide acquaintance with German literature, but, while anxious to do justice all round, his direct knowledge of English, American, and Italian authors is evidently very small; Darwin's name is Gallicised into "Darvin."

HAVELOCK ELLIS.

Prison Hospital Nursing: a Manual of First Aid and Nursing for the Prison Hospital Staff. By HERBERT SMALLEY, M.D., Medical Inspector of Prisons. Published by authority. London, 1902. 8vo, pp. 365.

This is a notable book, marking as it does a new era in prison management. The frank recognition of scientific principles in the treatment of criminals reassures us. It is well known that there does exist a band of able workers in this department of State administration, of whom Dr. David Nicolson has long been a pioneer; but the service has been benumbed by obsolete ideas in high places, and it is only of late years that reformation of methods has been in the air. We

welcome this volume as an earnest of what is to come, and congratulate Dr. Smalley upon having produced a work of enlightenment and practical value. The prison service owes a deep debt of gratitude to him in this matter. We can well imagine the difficulties which had to be overcome in organising a prison hospital staff, and in setting about training that staff in accordance with modern methods.

Dr. Smalley, among other acknowledgments, expresses his thanks to the compilers of the *Handbook for Attendants on the Insane*, and to our colleague, Dr. John Baker, for his assistance. We have been well satisfied with the success of the handbook, and take it as a great compliment that it should have been found useful in opening new ground.

The work under review begins with an introductory chapter on the general principles of nursing, and is continued, through anatomical and physiological teaching, to the special work of observing the sick and administering medical remedies and using surgical appliances. Emergencies are fully described, and appropriate methods of dealing with these are also described. For our readers the most interesting part of the book is the division which deals with crime and criminals, their classification, mental characteristics, etc. Dr. Smalley points out how prisoners resemble their fellows outside prison walls, and then goes on to show that there are certain peculiarities of mind and body among them. A brief consideration of the facts of heredity and environment cannot fail to arouse the interest of the nursing staff and aid them to understand the position where, on the one hand, discipline and kindness work wonders on unfavourable specimens of humanity, and yet, on the other hand, every moral influence is rendered of no avail by others similarly conditioned. While the author is fully conversant with the opinions of the severe school of criminologists, he accepts their opinions with large reservations, acknowledging that their work has been useful, but warning officials not to entertain "a morbid sympathy, seeing with too lenient eyes the misdeeds of the majority of prisoners." He is hopeful that further study will throw more light upon the complex problems involved.

The classification of criminals proceeds on the usual lines, and the various groups are described tersely and clearly. Beginning with a brief discussion of sound mind, Dr. Smalley proceeds to discuss the insane criminal, and thereafter devotes a chapter to the prisoner under mental observation, with remarks on feigned insanity. The importance of obtaining accurate skilled information as to the conduct and condition of those supposed to be insane cannot be over-estimated, and we congratulate Dr. Smalley on having introduced a system of attendance upon criminals which must be productive of a higher standard of efficiency where that is greatly to be desired. We hope that the beginning thus made will produce results which will amply justify the labours bestowed upon this manual, and that it will really be used for the purpose intended.

The later chapters deal with disinfection, preparation of food, etc., and the whole is supplemented by questions on the various chapters, a glossary, and an ample index.

Review of Neurology and Psychiatry. Edited by ALEXANDER BRUCE, M.D., with the assistance of EDWIN BRAMWELL, M.B. 8vo, vol. i, Nos. 1 *et seq.* Edinburgh : Otto Schutze & Co., publishers, 1903. Price 20s. per annum, post free.

This important venture will assuredly justify itself in these later days, when neurology has been specialised into a great and important subject. It could not have been started more opportunely or under better auspices. The preliminary statement shows that this new journal is to provide in English such a periodical as we are already familiar with in other countries. It is, in fact, an adaptation of foreign ideas, and will be of similar value to those who are urgent to know what is being done at home and abroad in the shortest space of time. We have long recognised the value of this kind of work, and have endeavoured in this JOURNAL to present current information on psychiatry in such a manner as to indicate where further information is to be found. Dr. Bruce has laid us under an obligation in carrying out this plan on a wider basis, and especially in bringing important abstracts into notice. The *Review* is designed to extend over forty-eight or sixty-four pages, made up of short original articles, preliminary communications, abstracts, reviews, and bibliographies, as well as digests of recent progress on special subjects.

We note that Sir William Gowers, Sir John Sibbald, Dr. Byrom Bramwell, Dr. John Macpherson, Dr. Ashby Mackintosh, and other prominent physicians have contributed articles ; and that the abstracts are particularly well prepared for the purpose in view. This gives us occasion for recommending the *Review of Neurology and Psychiatry* to our readers with every confidence, and we trust that it will have a brilliant future in the interests of the profession.

General Paresis, Practical and Clinical. By R. H. CHASE, A.M., M.D. (Philadelphia). London : Rebman, 1902. 8vo, pp. 291, 18 illustrations, 4 figures. Price 8s. net.

This monograph, from the pen of the Physician-in-Chief of the Friends' Asylum for the Insane, is especially directed to the attention of general practitioners.

In a monograph having this object an exhaustive scientific treatment of the subject is not expected, but rather such a description as will give a clear view of the subject. This book, it is to be feared, falls short of its objective by giving an amount of detail and division, with a deficiency of emphasis of important points. This is evidenced by the numerous illustrations, many of which are by no means strikingly characteristic of general paralysis. Similarly the numerous cases quoted are interesting rather than diagnostically instructive.

The facts collected in the book are numerous, but there is practically nothing that is new or that demands criticism from the point of view of the specialist. They are well up to date, and mention is made of the most recent pathological views of Forbes Robertson, Mott, etc. The type is excellent, and the book is well produced.

Part III.—Epitome.

Progress of Psychiatry in 1902.

BELGIUM.

By DR. JULES MOREL.⁽¹⁾

THE year 1902 was distinguished in Belgium by the meeting of the International Congress for the Care of the Insane—a meeting remarkable not alone for the importance of the subjects that were dealt with, but also for the number of distinguished foreign alienists who attended from all parts of Europe. Dr. Peeters, Physician and Director of the Colony of Gheel, served as President of the meeting, and conducted the proceedings with the greatest kindness and tact, displaying at the same time his thorough familiarity with all questions connected with the care of the insane on the most advanced lines. The Congress concluded by the adoption of certain resolutions which will entitle the proceedings of this assembly at Antwerp to rank among the most important works that have been done in connection with the organisation of asylums and of colonies for the insane.

The great number of papers presented to the Congress obliges us to be brief, and merely to indicate the general scope of the leading contributions. The reader who is anxious for further detail will need to refer to the printed 'Proceedings' of the Congress, which will constitute a very large volume. We could only glance at the discussions which arose on the papers. It would scarcely interest our readers to treat these discussions exhaustively, because on the one hand they were often of such a character as to have chiefly a local interest (an interest only for Belgians), and again because the resolutions, which were all finally adopted by overwhelming majorities, satisfactorily epitomise the deliberations which took place.

Dr. Keraval, of Armentières (France), opened the discussions by dealing ably with the question of *Patients, Public and Private, treated outside Asylums*. The subjects which he discussed are the following:

1. Can the establishments in which, by virtue of special enactments, persons attacked with mental unsoundness are placed, attain to the most free arrangements as to treatment?
2. Do forms of insanity exist in which either from the beginning or after a certain period of treatment in a closed asylum a certain amount of liberty can be given, specially measured according to the case?
3. What is this amount, and what modifications of liberty are most suitable to the patients in question?

These are the three great points which have constituted the guiding ideas in the changes which the care of the insane has undergone.

Dr. Keraval gave a history of insane settlements, beginning with Gheel and going on to those of Scotland, Germany, France, and Russia. He came to the conclusion that the closed asylum must be the method to be chosen for the greater part of acute cases. Perfected according

to the latest claims of psychiatric science, the closed asylum affords the means of examining and treating all those acute cases which are most susceptible of cure. The agricultural colony (*i. e.*, detached residential farm buildings), or pavilions with open doors within the asylum estate, have the advantage of introducing a comparative freedom, and beginning, as it were, to graduate the amount of liberty allowed; they have also the advantage of facilitating further study of the state of the patient's mind and disposition; but they are still part and parcel of the asylum. The domestic colony (settlement) is near the institution indeed, but is absolutely outside it, and the social life which it presents, being that of the hamlet or town, is entirely independent of the asylum. In one or other of these forms of colonies patients who are convalescent, or chronic cases who have become harmless, may be placed.

Dr. Van Deventer, of Meerenberg (Holland), dealt with the question of *The Organisation of Employment in the Settlements of the Insane around a Central Asylum*. In Germany, in Holland, and in some other countries the principle of the connection of a settlement with every asylum has already found a large application. Dr. Van Deventer stated that a patient committed to family care should be considered as a member of the family of the host, who ought to endeavour to make him a useful being by employing him at labour, especially at agricultural labour. But the attendants ought to be selected from among candidates acquainted with a trade, so as to be able to make use of them eventually as hosts in case they desire to marry. The patients can also be handed over to their own families if the latter come to live in the settlement. In certain cases the insane who are under family care may be employed in the workshops of the central asylum. The attendant-hosts should receive a supplementary course of instruction in the organisation of employment. Furthermore the settlement should possess a particular place where the patients could assemble for the purpose of recreation. Certain patients could be paid for their work with satisfaction to them and advantage to the institution which would profit by their labours.

Dr. Meeus, of Gheel, who collaborated with his chief, Dr. Peeters, in organising *The Professional Instruction of Attendants in Settlements*, treated of this subject, and insisted that it is as necessary in settlements as in asylums that the care of the insane should be committed to persons who have had special instruction, and have furnished evidence of possessing all the requisite qualifications. He rightly prizes the intellectual training of attendants and their primary education, which facilitates the development of their moral sentiments and helps to make them better understand the patience and even devotion that they must possess in the art of caring for the insane. Dr. Meeus adhered to the opinion of Dr. Van Deventer that it is right to furnish the host, who ought to be a real nurse, with every modern advantage of knowledge, instruction in the rules of their particular work, books, notions of domestic economy, and so forth.

M. F. Gerenyi, Inspector of the Charitable Institutions of Lower Austria, and delegate from Provincial Committee of Lower Austria, announced that in his country, when a plan was recently on foot for hospital provision, the question of reforming the care of the insane was

raised, and that the *Landtag* voted the following resolutions :—(1) Every asylum in Lower Austria shall in future be established at the same time for the treatment of the curable insane, for the care of the incurable, and for the colonisation of patients who are not dangerous. (2) The incurable patients who are able to work will go to the colony (settlement); those who cannot work will remain in a division of the asylum. Under the above conditions the *Landtag* sanctioned the erection of the asylum of Mauer-Oehling for 1000 patients. Even already the settlement comprises eight houses, used like those of Dr. Alt at Uchtspringe.

Professor Bleuler, President of the Swiss Society of Psychiatry, informed the Congress that the authorities of the asylums of Waldan and Münsingen have been authorised as an experiment to make terms with private families to place with them certain insane patients at the rate of one franc a day.

Dr. Vogt, of Christiania, stated that there are in Norway some colonies of five, ten, or twenty patients, but that the organisation is far from perfect. The condition of affairs is the same in Sweden, while in Denmark almost all the insane are cared for in asylums.

A communication was read from Mr. J. W. L. Spence, Secretary to the Scotch Lunacy Commission, with reference to the insane under private care in Scotland. The English readers of this JOURNAL are sufficiently familiar with this aspect of the question to render it unnecessary for us to enter here into details with regard to it. The same may be said of the important speech of Dr. MacPherson, Lunacy Commissioner in Scotland, on the present operation of family care in his country.

Dr. Marie, of Villejuif, formerly Director of the Settlement at Dun-sur-Auron, laid down the indications for *The Care of the Insane in Families in Relation to the Relief of Overcrowding in Asylums*. It is requisite always to have plenty of vacancies in the divisions for acute patients, in order to facilitate the early admission of recent cases and the conversion of our asylums into hospitals for mental and nervous diseases. Furthermore the divisions for acute cases ought to have as annexes with open doors divisions for convalescent patients, and the latter sections should be kept from overcrowding by frequent discharge on trial of patients who, during the remaining period of their convalescence, receive, when necessary, aid from "after-care" organisations (*patronage publique*). With regard to the chronic insane, they may remain in asylums, or at least separate blocks of asylums should be reserved for them. Another division of this class—and here is a point deserving of special attention—should be confided to such relations or friends as are willing to claim them, who would receive payment for them, varying in amount, but never exceeding the cost of ordinary family care among strangers. Ordinary family care as carried out at Dun-sur-Auron was dealt with.

Chronic lunatics, who for any reason are outside the scope of family care, were divided by Dr. Marie into (a) turbulent and dirty patients, to be put into chronic blocks in proximity to the large asylums; and (b) the chronic adult insane who can still be employed at labour, whom one would place, 100 or 200 together, in simple buildings with small

dormitories, and amidst surroundings approximating to family life. To these open cottages there should be attached market gardens or workshops for trades of a simple and easy character. By these economic principles the total cost would be reduced by 25 *per cent.* The maintenance at first and the initial organisation would no doubt in the beginning entail a higher charge, by perhaps 25 *per cent.*, but the profit arising from work would recoup this at the other end. There might even possibly remain a small surplus which would be applicable to purposes of after-care.

Dr. Alt, of Uchtspringe, reminded his hearers that in 1880 there had been but two settlements in Germany, those of Bremen and Hofheim. The foundation of the settlement at Ilten has given a general impulse to the extension of family care, and during the last two or three years nineteen asylums in Prussia have begun the attempt to treat the insane in family care.

Professor Tamburini, of Reggio-Emilia, in a paper of great brilliancy, argued in favour of—

1. *The placing of the insane in other special establishments as well as asylums.* Among such establishments are to be reckoned—(a) Almshouses or hospitals for the aged who are unfit to labour, or for chronic patients. In Italy hospitals of this kind contained 2573 chronic incurable lunatics. (b) Medico-pedagogic institutions for congenital cases of weak intellect. There are at present seven of these in Italy, and their number as well as their individual size is constantly being increased. (c) Establishments for the treatment of sufferers from pellagra during the early stages of that affection. There are three of these in Italy, with a population of 560 pellagrous patients. (d) Agricultural colonies. Of these Italy possesses three, but all in connection with asylums, of which in each case they constitute a division. (e) Asylums for criminal lunatics. Three in number. They contain nearly 700 patients (persons under sentence, or persons charged with crime but found irresponsible owing to their mental state).

2. *Family care.* In 1898 there were 1416 lunatics treated in family care—that is to say, 4 *per cent.* At present the number has reached 2000. This figure includes patients under two forms of family care: (a) care in the patient's own family (homo-familial); (b) care in the family of a strange host (hetero-familial).

The "homo-familial" system has not in Italy been attended by the success that was hoped for, by reason of the difficulty which has been experienced in exercising a thorough, constant, and efficient supervision over the patients and their treatment. In some districts this system has been given up.

On the other hand, family care in households other than the patient's own home, especially where it has been adopted with all the constant precautions that are requisite, has given most satisfactory results. For the last four years Professor Tamburini has committed some of his tranquil female patients (dements, certain epileptics, and sufferers from hysterical insanity and paranoia) to family care in the households of attendants or employés, past or present, of his asylum who live in the neighbourhood of the institution. He has found among many of these patients an improvement in the mental state and a bettering of

the general demeanour. They become attached to the families of their hosts, employ themselves actively, and enter with much propriety into the enjoyments of liberty and of social and domestic life. The dislike and suspicion entertained by the families in the neighbourhood towards the patients has disappeared, and the number of those who apply for patients constantly increases. Dr. Cristiani, Director of the Asylum at Lucca, has followed Tamburini's example, and with the same success.

Dr. Van Dale, of Ermelo (Holland), propounded not only his own opinion of family care, but that of the majority of his Dutch colleagues, who at their meeting in last July were engaged for a long time on this question. The Psychiatric Society of the Netherlands unanimously accepted the principle of the necessity for family care. The colony of Ermelo was established before 1890, and of late years beginnings at family care have been inaugurated at Bloemendaal (Loosduinen), and at Dennenoord (Zuidhoren). The author records with satisfaction that he has found considerable support from the two medical inspectors of the Dutch asylums, who have expressed their lively sympathy with the movement. The Dutch Minister for Home Affairs, again, has shown himself very favourable to the extension of family care. "Holland," says the author, "will proceed rapidly along the path of this humane and beneficent reform."

Dr. Zakaroff (Russia) mentioned that, of 200,000 lunatics there, some 50,000 have been already committed to family care.

The above-mentioned contributions served as the basis for a general discussion. An immense majority of the alienist physicians at the Congress were favourable to the multiplication of colonies and to the family care of the insane, but with certain reservations. All this will be demonstrated by the resolutions adopted by the Congress and reproduced at the end of this article.

Dr. Swolfs, of Brussels, Physician to the Asylum of Dave, near Namur, attacked the system of Gheel, which most of the preceding speakers had eulogised. He declared that family care was losing credit more and more with alienists and philanthropists, in spite of the statements to the contrary emanating from the majority of the members of the Congress, and in spite of the evidence furnished by the resolutions adopted. The reflections which he cast upon the colony of Gheel were warmly disputed by Drs. Marie (of Paris), Alt (of Germany), and Peeters (of Gheel), and these gentlemen proved that not one of the alleged facts was true.

The Position of the Alienist Physician was the subject of a paper by Dr. Van Deventer, of Meerenberg. The author declared against the possibility of two administrative authorities (physician-in-chief and lay director) on the same asylum, because this state of affairs must inevitably lead to collision. The non-medical director is incapable of taking on the duty of the physician, or even of fulfilling the administrative work which the latter undertakes. Further, a medical superintendent should not be appointed until he has passed through a preliminary training in an asylum and shown that he possesses administrative capacities. In almost every country the physician-in-chief to the asylum is at the same time its director. The function of physician and director has become

more important than ever since the introduction of the professional teaching of attendants, since the progressive tendency has set in towards the multiplication of wards with open doors, and since the adoption of domestic colonies (settlements in family care). Moreover the physician and director should retain in his own charge a certain number of patients, should employ himself in scientific work in the laboratories, and thus be able to introduce new methods of examination and treatment of patients. Special physicians should be attached to the staff of all asylums for the pursuit of anatomo-pathological researches, psychophysical investigations, etc. Finally, arrangements should be made to encourage the taste for psychiatric studies, and asylums should contain provision for "voluntary" physicians, quartered and fed as assistant medical officers.

Dr. Van Deventer also discussed at length the question of *The Professional Education and Training of Attendants in Asylums for the Insane*. This question is so familiar, and its problems have been so well solved in the United Kingdom, that we may be excused from detailing the reasons for this instruction so ably set forth by our author, who has initiated this movement in his asylum, and has found so many followers among his Dutch colleagues that there are now more than 450 trained attendants who have obtained the diploma.

On the Means of improving the Medical Organisation of the Belgian Asylums was the title of a paper by Dr. Crocq. The author, having given a description of the extreme insufficiency of the present medical organisation of the Belgian asylums, gave an excellent account of the medical organisation in the greater part of European asylums. His conclusion therefrom is that he desires for Belgium that which is already in existence in the great majority of asylums throughout the whole world. From this point of view it is to be hoped that Dr. Crocq's work will be consulted with advantage by the Belgian legislators when they shall take into consideration the revision of the present laconic law dealing with the management of lunatics. The author would wish that the pauper asylums should be administered by the public authority; that every asylum should have its physician and director, to whom is committed the medical and administrative charge; that the appointment of the physician and director should be made by the public authority; that courses of clinical psychiatry should be delivered; that a special diploma in psychiatry should be established; that only physicians holding this diploma should be attached to asylums; that such gentlemen should not be appointed physician-directors until they have served at least four years as assistant physicians; that their salary should be fixed (in Belgium most of the physicians are paid *per diem et per caput*, so that the more numerous the patients are the higher is the pay!); that there should be one medical man for every hundred patients; and that general practice should be prohibited to asylum physicians.

Dr. Manheimer-Gomés read a paper on *The Family Care of Backward Children*. The number of backward children which now overcrowd special asylums is so great that it behoves us to seek fresh means of dealing with them. This can be found in domestic care. That method enables us to treat patients who are only liable to rare attacks of excite-

ment, and who are otherwise docile, without condemning them to a definite imprisonment. In the same way convalescents can be dealt with. As to the class of idiots incapable of education, and dangerous, domestic care of the "homo-familial" type, as in Italy, has not been successful in the Department of the Seine. "Hetero-familial" care allows us to select our hosts with a view to their special education and aptitude, and to reward and punish them by giving and removing patients and so forth. The best situation is in the country, and the best occupation for the largest number is agriculture. For the merely backward through degeneration or weakness the establishment of special schools is to be advised.

Dr. Decroly, of Brussels, spoke on *The Care of Abnormal Children*. The anomalies of childhood display themselves under very varied aspects. According as one looks at them from the point of view of the psychologist, alienist, schoolmaster, jurist, minister of religion, etc., they will be called imbeciles, weak-minded, backward, lazy, wayward, vicious, hysterical, etc. It is necessary to bring order into this chaos if we are to be of practical service in the treatment of this class. The author suggests as the best general designation that of *abnormal children*—whether the abnormality be due to *physical defect* (troubles of speech, tics, slight chorea, etc., the senses and intellectual powers being intact), or to *defect of the senses* (blindness, deafness), or to defect of the intellectual faculties (backward, imbeciles, idiots), or to defect of the emotional and moral faculties (vicious, wayward, criminal, epileptic, etc.), or, finally, whether it be due to the fact of absence or imperfection of education (orphans, children morally neglected, spoilt and ill-brought-up children). The author recognises that these groups are not absolutely differentiated. Society protects, relatively at least, the blind, the deaf, the infirm, the idiots, the sufferers from the graver forms of epilepsy; it mainly neglects those who are less completely incapacitated, and who, while with care they might be useful to the community, being neglected, are capable of being very dangerous. The backward, the sufferers from the lighter forms of epilepsy and the like, cannot be put into asylums, but should be treated in special schools, as at Antwerp and Brussels. The vicious, wayward, rebellious, and criminal should be placed either in special institutions or in institutions specially adapted for them, like those used by the English Government, viz., industrial schools, truant ships, and training ships. It is desirable that the teachers should be associated with physicians in the task of educating the abnormal, and that there should be established a means of after-care to supplement the mere school or training course and to support and start in life such as were found capable of taking a place in the common existence of society. The remaining cases should be placed in a special settlement, under regulations, where they can be employed, preferably at farm and garden work. Thus a quiet and regulated life can be secured for them, and their mischievous tendencies are diverted by regular work, while the value of their labour will go to pay for their cost to the State; and the State, following the example of those countries which are at the head of civilisation, will hasten to adopt these measures from the moment that those who hold in their hands the highest moral and material responsibilities of the country come to understand that

this matter is not merely one of reasoning and sentiment, of humanity and of charity, but that it has, viewed more widely, important economic factors, and that it is intimately bound up with questions of social prophylaxis.

Dr. Paul Masoin, of Gheel, spoke of *The Domestic Care of Epileptics*. The author, for scientific reasons, is not one of those who favour asylums for epileptics. He prefers to see them scattered about in a settlement if the latter is provided with sufficient medical help to properly care for them. He considers that the mode of life (diet, etc.) of a settlement is quite suited to epileptics, and that when such patients are isolated with their hosts they are the objects of an amount of care that they cannot receive in wards crammed with patients of this class. The hosts get to know their patients intimately in a very short time, and are very often able to anticipate their attack and thereby to take the necessary measures.

Dr. Ley, of Antwerp, spoke on *The Treatment of Idiot and Imbecile Children in a Colony with an Asylum School*. The advantage of the system commended by the author would be the bringing up of the child in that potent educative atmosphere, the family, with its constant multiplicity of experiences and psychic reactions. The father of the medico-pedagogic method, the distinguished Séguin, long since protested against big asylums for children.

Dr. Vos, of Grave (Holland), read a paper on *The Selection of Localities for Family Care*. He prefers the system of Gheel, Lierneux, Dun-sur-Auron, Ainay-le-Château, and even the system adopted by Alt, to the Scottish system. Besides fundamental hygienic conditions, it is necessary to take into consideration the nature of the population (alcoholism, political dissensions, etc.), and also the risk of accidents (canals, rivers, railways, etc.). Vos gives the preference to sandy tracts of country intersected with plantations of timber, where the work of the hosts is very varied, and particularly where the work is mainly agricultural. Industrial localities are not suitable.

Dr. Claus, of Antwerp, read a paper on *The Care of Epileptics*. Contrary to the opinion of Dr. Masoin, the author would wish that all epileptic lunatics should be placed in closed asylums. He calls for the establishment of special asylums, hospitals, and schools for epileptic children.

Dr. Marie read a note on *The Internal Organisation of Certain Central Institutions*. The author particularly condemns those private asylums which undertake the treatment of the insane by contract, which is a source of enormous incomes, because the proprietors do not use their profits for the improvement of the medical and administrative departments of the institutions. The proprietors appoint the physicians of their own choice. Dr. Marie quoted in support of his contention, first, his own personal observations; then the statements of certain alienist physicians of Belgium, Dr. Masoin, Professor in the University of Louvain, Dr. Lentz, and Dr. Morel; and finally, the excellent report of the position of the insane in Belgium, printed in 1895, in which the Minister of Justice himself sharply criticises the existing organisation of the Belgian asylums, and particularly the organisation of those given up into private hands, the appointment of the physicians by the proprietors, the insufficiency of the medical staff, and the absence of medical work

in the majority of the asylums. A similar state of affairs exists in the private asylums in France, and Dr. Marie, like all true alienists of every country, condemns the contract system for the treatment of pauper lunatics.

Dr. Medici presented a paper on *The Family Care of the Insane in the Settlement of Levet* (Department of Cher). This colony, being a small one, serves as a good model. Every department could start a colony, no matter how small, for chronic and harmless cases. In family care the latter will augment directly the small resources of the poor population, who, while doing a good work for the insane, make a little profit for themselves, and also benefit by escaping the increased taxation required for building and working a central institution. Thus the plan is at once democratic, economic, and liberal, placing the patient in his natural surroundings, saving the cost to the department, and giving care to the greatest number at the lowest rate. The author gives a pretty long history of settlements for the insane, particularly those instituted by the Department of the Seine, and arrives at this conclusion—that asylums ought to be establishments for treatment; existing asylums ought to be relieved of overcrowding by carrying out a system of family care for the chronic and harmless. At the same time the number of their physicians should be increased, to enable the latter to have an individual knowledge of their patients and to separate the acute and dangerous cases. It is only when the patient has been studied and classed that he will be either kept on in the central asylum or placed in one of the open divisions, where he continues to be treated. If he appears curable after a varying lapse of time, he should be committed to domestic care, which need only be brief if he is already convalescent. Dr. Medici gives a detailed description of the settlement of Levet, of its cost of maintenance, and of the class of patients who have been sent there. He gives also extremely interesting clinical outlines of a number of individual cases, important as showing how many varieties of insanity can, under proper care, be treated by the domestic method.

Dr. Havet,⁽²⁾ of Gheel, dealt with *The Importance of Scientific Laboratories in Asylums for the Insane*. The author states that the importance of such laboratories is recognised all over the world, and that in this respect Belgium is in a backward position. Laboratories may be of great use from various points of view. They should include—(1) arrangements for chemical and microscopical analyses with the object of establishing diagnoses and for aid in hygiene (analyses of blood, sputa, urine, etc.), bacteriological research (tubercle, diphtheria), so necessary for the protection and treatment of patients and staff; (2) arrangements for systematic autopsies (cause of death, instruction both of physicians and attendants); (3) means of promoting the advance of mental medicine (normal and pathological psychology, clinic in nervous and mental diseases, cellular and pathological biology). All this work requires the activity of many workers, and the principle of the division of labour can well be applied to researches of this sort.

Dr. Picqué, Surgeon to the Asylums for the Department of the Seine, under the head of *Surgery in Lunatic Asylums*, dealt at much length with the necessity for a surgical service in asylums, particularly in

those of a large centre. He described several cases in which patients who were operated upon have recovered mental health at the same time with physical health.

A communication was submitted from Prof. Pick, of Prague, on *The Registration of the Insane who are not confined in Asylums*. The following are his conclusions :—(1) In order that the law may be able to protect all the insane, it is indispensable that it should be obligatory to report all the insane who are treated outside asylums. (2) Though it may not be possible to classify the mental ailment, the duty of reporting the patient depends upon the new situation which is produced, and which is judicially definable—the diminution of liberty or of personal responsibility, the limitation of civil capacity, personal insecurity, and the necessity for treatment. (3) While signalling the necessity for registering the insane, this notification should be carried out in such a manner as not to excite the prejudices of the public. (4) With regard to the insane in their own home living with their parents or children, notice should be sent when an internment of three months' duration has been made; but when a patient is supported at the public cost notice should be sent at once. (5) Notification should be made by whomsoever has the care of the patient. It does not seem practicable to demand it from the physician. (6) When a patient is located in the house of a strange host notification should be sent immediately by the host. (7) The physician should have the right to make a confidential report in any of the preceding or following cases. (8) With regard to asylums not known as lunatic asylums, we have—(a) “Maisons de santé,” hydropathic establishments, “hospices,” convents, etc. The duty of notification begins here as soon as the patient's personal liberty or civil capacity is interfered with. Notification should be made by the physician of the establishment. (b) Hospitals which only receive the insane temporarily. Notification should be made when their stay exceeds fifteen days. Psychiatric clinics attached to hospitals may be subjected to special regulations, and these regulations should resemble those framed for patients who are taken care of in their own families. (c) Establishments for idiots, which with regard to notification should stand in the same rank as asylums. (d) The same may be said of asylums for epileptics. In both of these latter cases notification should originate with the physician or the superintendent of the institution.

Dr. Olah, of Buda-Pesth, read a paper on *The Best Means for dealing with the Psychoses at their Beginning*. This author concludes with these proposals :—(1) That we should suppress everything which interferes with the full utilisation of asylums as prophylactic and therapeutic institutions. Thereby we also combat the notions which are popularly current on the nature of mental disease. (2) That we should endeavour to make asylums more popular with the general public, and by the close supervision of cases in family care try to establish a social prophylaxis. (3) That we should give our public asylums the title of “State Institutions for Nervous and Mental Diseases.” (4) That we should eschew all unmeaning denominations as not suitable to the end in view. (5) That we should minimise as much as possible the formalities preceding the admission of patients. (6) That the placing of a patient in an asylum

should not always necessarily require a declaration of his legal incapacity. (7) That every effort should be made by the denomination, the organisation, the character, etc., of our asylums to make the public understand that mental disease is a bodily affection closely allied to the other diseases of the nervous system.

Dr. Marie spoke on *Domestic After-care of the Convalescent Insane*. In this work the author truly and feelingly complains that more trouble is bestowed on the after-care of criminals who have been discharged from prison than upon recovered lunatics, who are often turned loose upon society without a refuge and without occupation. He reviewed what had been done abroad with this object, and came to the following conclusions :—After-care organisations for the insane who are recoverable should look after the families of the patients while the latter are confined in asylums, so as to secure a home for them on discharge and to re-establish the relations between the patients and this home in case of recovery. Placing convalescents in family care permits of early discharge, and constitutes the best prophylaxis against relapses. It should be encouraged by the public authorities, who, by arranging funds for this purpose, would avoid having to pay for detentions in the asylum, prolonged and repeated. Domestic after-care, in case of relapse, should supply first aid at home and should simplify the formalities for sending back the patient to the asylum, cases in which return is delayed being, as we know, the least curable. After-care should be made use of to instruct the public about the insane, and to destroy those prejudices which lead people to regard the lunatic as different from all other classes of patients, and as always dangerous. The preaching of these doctrines, and active moral support for discharged patients and for their families, are as necessary as aid in money or material support. The task of after-care is to secure both.

Dr. Terwagne, of Antwerp, contributed a paper on *Tuberculosis among the Insane*, in which he declared himself entirely opposed to placing tuberculous patients on settlements. Dr. Peeters, on the contrary, recommends settlements, because in them the patients live comparatively apart, whereas in asylums the life in crowded wards constitutes the great source of propagation.

The courteous, learned, and able Secretary to the Congress, Dr. F. Sano, of Antwerp, contributed a communication on the subject of *City Asylums*. The author shows the need in every large town of a reception asylum, where the insane could be received on the first appearance of their illness. Cases for which only a brief period of treatment was considered necessary could be retained there; other cases would be sent either to the ordinary asylum or to the settlement.

The Congress concluded its labour by the adoption of the following resolutions, which were carried by an immense majority :

1. Family care ought to be made use of in all the forms of insanity and in a great number of individual cases. (Tamburini.)
2. For a large portion of the insane who require care and who can be submitted to this form of treatment, the family colony represents that form of treatment which is the most natural, the most free, the best, and the *least expensive*. It forms, besides, an important thera-

peutic agent for a great number of patients. Family care can be adopted as an adjunct to any asylum which is directed by a psychiatric physician, and can be instituted according to the exigencies of time and place, particularly when the attendants are placed in the enjoyment of comfortable dwelling-houses—a thing which is besides indispensable if we are to obtain first-class attendants. But in the majority of large institutions family care can only be adopted on a very limited scale. The general use of the method cannot be obtained except by the erection on suitable country properties of central institutions, reproducing, but on a small scale, the well-known special arrangements (of an asylum), and serving as points around which the domestic colonies can be founded. Domestic colonies do not do away with the necessity for existing institutions, as they by no means constitute the most suitable abode for every case of insanity; but they can check the constant increase of the number of establishments in a very ready, practical, and cheap way. (Alt.)

3. It is essential that the labour of the insane shall be carried out under the direction of the medical staff of the asylum, who shall direct its nature and duration. (Van Deventer.)

4. It is essential that those to whose charge the insane are committed should receive professional instruction, theoretical and practical. The communication of this instruction should belong to the medical staff of the asylum, on whom is also incumbent the duty of controlling the results. (Van Deventer.)

5. The direction of an asylum for the insane must belong to the physician, both with regard to medical and administrative charge. (Van Deventer.)

6. In accordance with the opinion of Guislain, every asylum ought to contain one physician for every 100 patients. Every asylum physician, in the interests of the patients committed to his care, should be housed in the establishment. General practice should be prohibited. (Van Deventer.)

7. It is desirable that every asylum for the insane should have such laboratories as are necessary for the study of everything that can contribute to the diagnosis of disease or the progress of mental medicine. (Van Deventer.)

8. Considering that a ready access and an early admission to hospital treatment form the most sure guarantee for recovery from insanity, all facilities should be given to treatment outside asylums, and also to speedy admission for treatment on the appearance of the earliest signs of disease, and without preliminary certification being always necessary. (Voison, Alt, Leroux, Marie, Francotte.)

9. The progress of contemporary psychiatric science condemns the employment of means of restraint. (Alt, Marie, Van Deventer.)

10. Considering the great advantage of medico-pedagogic institutions for backward children, it is desirable that these institutions should be developed and increased everywhere. In these institutions education should be systematically given, at once moral and intellectual, technical and manual, and should be directed to preparing the pupils for a useful calling. The scientific direction of all these medico-pedagogic institutions should be medical. It is desirable that committees of after-care

should be established to watch over the subsequent lives of patients of the phrenasthenic class discharged from these institutions. It is important that special courses of instruction in the education of the backward should be instituted in normal schools. (Tamburini, Ferrari, Decroly, and Ley.)

11. Considering that among the causes of the great number of backward children the science of to-day recognises maternal affections during gestation and delivery, and the diseases that occur in early infancy, and considering that these causes are connected with conditions of social life, it is requisite to inquire how far it is possible to contend against them. In the hope of effecting an improvement in these conditions, the Congress will proceed to nominate two commissions—one of specialists to study the relative importance of the diverse causes of phrenasthenia of that order which may be called social; the other to investigate the best practical means to remedy the conditions in question. (Madame Marie, Dr. Ferrari.)

12. It is desirable to establish in domestic settlements an asylum school, where the children, under competent medical direction, could receive complete medico-pedagogic treatment. The children would have, before this, been subjected to a sufficient period of observation in the special schools or medico-pedagogic institutes. (Ley, Ferrari.)

13. It is desirable to solve by the experimental method the question of the influence of the insane in settlements on the children and the normal adults who are around them. (Dr. Schuyten.)

14. All closed institutions for the insane ought to be provided with resident physicians in sufficient number, and should have buildings annexed permitting of the application of the family system under effective medical supervision, as a curative means during convalescence and as a provision for such chronic and harmless cases as are suitable for liberty under control. (Marie and Buffet.)

NOTE.—Our valued correspondent desires us to add to the above report that it must not be supposed, because almost all the proposals made at the termination of the Antwerp Congress emanated from foreign physicians, that therefore the alienists of Belgium are indifferent to the progress of psychiatry or to the need for reform in the care of the insane—outside the question of family care, so specially discussed in connection with the Belgian settlements. To us it would seem that the organisation of the closed asylums of Belgium, which, though dealing with public patients, are in private hands, would not commend itself in countries where the principle of “no taxation without representation” has been so entirely accepted that the public could not be asked to pay for any institutions which they do not rule, either directly through their representatives or indirectly through the State. The visiting physicians of institutions such as those to which we refer may be excellent men, but they can hardly see as clearly as we probably do the insufficiency of the arrangements under which they themselves hold office. Dr. Morel points out that all Belgian alienists, however, are not without a distinct enough perception of the need of certain reforms [though the peculiar position of affairs in that country may often hinder

the freest expression of opinion]. Dr. Crocq, as will be seen above, spoke strongly at the Antwerp meeting on the question of the pay and position of the medical officers of asylums. So long ago as 1895, Dr. Masoin, Professor in the University of Louvain, expressed himself even more strongly at a meeting of the *Société de Médecine Mentale de Belgique*, saying that "the remuneration of the physicians to asylums ought to be fixed on a uniform scale, and not on a *pro rata* scale according to the number of patients" (*per diem et per caput*, as above). "You see the reason for this demand: In the present situation of affairs *the physicians have an interest in retaining in the asylums certain patients who are in a condition to be restored to liberty*. Now we always do ill when we put a man between his interests and his conscience." [Where the poor, whose relatives have little power or opportunity to protect them, are treated at so much a head, and where there is no effective central supervision, the physician is placed in a most painful position, and can hardly expect not to have the worst construction put upon his action.] Dr. Masoin asks whether there is not a danger that "the insane may become the victims of avaricious management."

Dr. Lentz, medical superintendent of the State Asylum at Tournai, at a meeting of the same society in the same year, said: "The future of the care of the insane seems thus to lie in the reform of the asylums managed under contract. The central point of this reform is the preponderance of the medical authority, and therewith the increase of the special staff. The means to be adopted are, wherever it is possible, to place those establishments which perform the office of public asylums under the control of the public authorities, who will be guided only by medical opinion and will act solely for the good of the patients."

A year earlier, Dr. Morel, Medical Superintendent of the State Asylum at Mons, in his presidential address to the Society, declared that "scientific life has not yet sufficiently penetrated into our asylums. The cause is to be sought in the relative state of inferiority in which our alienist physicians find themselves, and in the ignorance or indifference which we meet among the majority of the proprietors of our asylums. The numerical insufficiency of the medical staff, the insufficiency of their pay, the absence of medical libraries and of all other scientific resources, cannot fail to cast our colleagues into a state of discouragement which too often degenerates into a state of indifference as to science. . . . No one in Belgium seems to take an active interest in improving the scientific position of our alienists. We must protest that in the year 1850 (that is, at the time when Belgium adopted its first law as to the management of the insane) the science of mental medicine was very far from being what it is in our days. From that date in most European and North American countries the attention given to the endeavour to secure the best men for the specialty has been ceaseless and increasing. . . . Can the alienists of our country sit with their arms crossed in face of the progress realised among our neighbours?"

Monsieur Lejeune, Minister of State, formerly Minister of Justice, declared at the International Congress of Criminal Anthropology held at Amsterdam in 1901: "*In Belgium the regulations are defective. The asylums are in the hands of private individuals.* I would wish all that altered."

The resolutions adopted at Antwerp with regard to asylum management were not by any means new. Many of them have already found practical application in most asylums in Europe and the United States. Attempts to realise them in Belgium, however, have so far proved fruitless.⁽³⁾

(¹) The Editors regret that the publication of this important contribution had to be postponed until the present number of the JOURNAL.—(²) Now Professor at the University of Louvain.—(³) We cannot believe that they will continue without fruit when made by such bold and earnest advocates. Those readers who may wish for further information on certain of these questions would do well to consult Dr. Morel's many papers thereon, among which we may mention—*L'enseignement professionnel des gardiens dans les asiles d'aliénés* (*Bulletin de la Société de Médecine Mentale de Belgique*, 1894-95); *Le rôle du patronage à l'égard des aliénés, avant, pendant et après l'internement* (*Congrès international des Patronage*, 1898); *L'alitement dans le traitement des formes aiguës de la folie et des modifications qu'il pourrait entraîner dans l'organisation des établissements consacrés aux aliénés* (*XIII Congrès International de Médecine, Section de Psychiatrie*, Paris, 1900); *La prophylaxie et le traitement du Criminel Recidiviste* (*Congrès d'anthropologie criminelle tenu à Amsterdam*, 1901).

[NOTE.—The word "colony" is often used in Continental countries in two senses—one meaning an asylum farmstead with residence for patients, the other a township where patients are maintained in private houses. Where the word is used in the latter sense in our esteemed colleague and correspondent's communication we have sometimes substituted the word "settlement," so as to avoid the danger of confusion.]

Epitome of Current Literature.

I. Anthropology.

The Proportions of the Adult [*Die Proportionen des erwachsenen Menschen*]. (*Zeit. f. Morph. u. Anth.*, H. 2, 1902.) Pfitzner, W.

This valuable and elaborate paper is one of the series of socio-anthropological studies to which attention has been called from time to time in the JOURNAL. It is the last we may hope to receive, for Prof. Pfitzner died at Strassburg on New Year's Day at the age of 49. He was a worker whom we can ill afford to lose, and his patient and thorough investigations of many difficult and obscure questions have done much to illuminate the social and psychological bearings of anatomical and anthropological data. (An authoritative sketch of Pfitzner and of his twenty years' activity at Strassburg, from the hand of Prof. Schwalbe, will be found in the *Anatomischer Anzeiger*, 1903, No. 22.)

The present "socio-anthropological study" embodies a vast amount of labour, largely of a mathematical character, compressed into 113 pages. It would be impossible to summarise it within a reasonable

space. One result of Pfitzner's work is to rehabilitate the value and significance of averages which, provided we are dealing with sufficiently large and sufficiently homogeneous data, he found to correspond almost invariably with the plurimum, so that the most frequent dimension is also the average dimension. Reason is also found for questioning the current view that the infant's head is relatively large as compared with the adult's in order to favour the early development of a highly important organ. This question, as Pfitzner viewed it, may be generalised, and is really one of proportion ; with the increase of every dimension corresponds, but in decreased degree, the increase of other dimensions ; "there is no difference between children and adults, and every individual has the head that corresponds to his stature." The adult standard of proportions would thus not be fixed and preordained, but merely the accident of a stage of growth which has stopped, but would lead to a new scheme of proportions if it could continue. It is evident that Pfitzner was here entering on a new but somewhat difficult field of speculation.

HAVELOCK ELLIS.

2. Neurology.

Old and New Researches on the Brain [*Alte und neue Untersuchungen ueber das Gehirn*]. (*Arch. für Psychiat.*, B. xxxvi, H. 1.) Hitzig.

In this continuation of his inquiry Dr. Hitzig treats of the relations of the cortex cerebri and of the subcortical ganglia to the function of vision in the dog, and prosecutes his old polemic against Munk. The disputes of these two distinguished physiologists are so far useful that they constitute some safeguard against one being misled, as each is ready as well as able to correct any oversight or error in his opponent's statements. In the present paper Dr. Hitzig gives the details of ninety experiments at considerable length, and illustrates his text with engravings. To give a *résumé* is impossible, and to criticise the interpretation which the professor gives of his experiments would be presumptuous. Those who are engaged in original research will go to Hitzig's paper for themselves. It will be sufficient here to present his conclusions. He found that injuries to the sigmoid gyrus were almost constantly followed by disorders of vision. To produce this result it was sufficient to lay bare the convolution. Injuries to the orbicular centre were followed by disorders of the optic reflexes, and often, too, by a wider opening of the eyelids. If the lesion be made somewhat anteriorly and laterally, approaching the centre for the facialis, it leads to impairment of the nasal reflexes. The anterior limb of the II—IV primitive convolutions, as well as the anterior part of the descending nerve-bundles and the inner capsule, may be injured without any direct disturbance of vision following. It will be remembered that Munk holds that the mental or cortical blindness of certain parts of the retina only results from injuries of the posterior region of the brain. Hitzig promises in a further contribution to consider the effects of lesions to the posterior portions of the hemispheres.

WILLIAM W. IRELAND.

Functions and Diseases of the Frontal Lobe in Man [*Leistung und Erkrankung des menschlichen Stirnhirns, 1 Theil, Graz, 1902*]. (Reported in *Neurol. Cbl.*, Oct. 16th, 1902.) Anton and Zingerle.

There are still many unsolved questions about the functions of the frontal lobe; most investigators think that it contains centres for the muscles of the head and trunk, while Munk places them on the convexity of the hemispheres, and Horsley on the median plane of the marginal gyrus. It seems certain that in front of the sulcus præcentralis there are centres for the movements of the eye. The frontal lobe has an influence on the maintenance of the bodily equilibrium.

In their laborious study of the histology of this lobe the authors have found that the structure of the frontal lobe is not different from that of the other lobes. The great mass of the association-fibres lies laterally to the ventricles; the projection and commissural fibres nearer to the middle line. There are regions in the frontal lobe in which the fibres of the corona radiata are scanty. Hence impairment of associations may be explained. The authors point out that injuries to the frontal lobe are frequently followed by atrophy of the opposite side of the cerebellum.

WILLIAM W. IRELAND.

On the Localisation of Cerebral Hemianæsthesia [*Zur Localisation der cerebralen Hemianästhesie*]. (*Neurol. Cbl.*, No. 21, 1902.) Schaffer.

Dr. Schaffer observes that there are centripetal nerve-tracts which end in the optic thalamus, from which another neuron issues which passes to the cerebral cortex. From a case of hæmorrhage of the thalamus studied by Probst, it appears that the thalamo-cortical neuron passes through the lamina medullaris externa to the side of the inner capsule, and, lying close to the ganglion lenticularis, reaches the median convolutions, the parietal lobes, and the gyrus fornicatus. Those fibres which go to the occipital lobe spring from the pulvinar and disperse in the stratum sagittale externum. Probst's results agree with those of Flechsig. According to Déjerine and Long, there is no distinct sensory system in the posterior limb of the inner capsule; the fibres which go to the cortex, as well as those going to the thalamus, mingle with the fibres of the pyramidal tract, which, beginning in the knee, spread to the retro-lenticular segment of the inner capsule. Hemianæsthesia occurs under two conditions—(1) a lesion of the thalamus opticus which may affect the ganglion in the passage of the fibres either on the bulbar or cortical side; (2) when the conducting tract between the thalamus and the cortex is affected, the thalamus remaining intact. In this case the lesion is of an extensive character.

Observations made both by the clinical and experimental methods prove that the motor functions, the cutaneous sensibility, and the muscular sense are localised in the same parts of the cortex—that is, in the motor zone, which ought to be called the sensori-motor zone.

Dr. Schaffer then gives a description of a case of hemianæsthesia, a labourer, æt. 18 years, who suffered for above a year from complete motor and sensory paralysis of the left half of the body. The loss of sensation, which approached the middle line, was complete. The sense

of position was wanting in the whole left side. The special senses were unaffected, but the intelligence was diminished, the patient answering questions sluggishly and in short phrases.

On examining the brain there was found softening of the right hemisphere extending from the posterior limb of the Sylvian fissure over the lower part of both median gyri to the first temporal. This softening dipped inwards to the head and body of the nucleus caudatus and the anterior limb and knee of the inner capsule. This had brought about atrophy of the thalamus opticus, which was not directly affected by the softening. There was also a descending degeneration of the pyramids implicating the pons, medulla, and lateral columns of the cord.

The degeneration was most marked in the dorso-lateral nucleus of the thalamus, showing that the cortico-thalamal neuron was affected. The professor observes that the lesion was confined to the motor portion of the inner capsule, while the back part of the posterior limb was free, although this tract, according to Charcot, conducted sensory nerve-fibres. In this case, while only the motor portion of the inner capsule was destroyed, there was hemiplegia with decided hemianæsthesia.

WILLIAM W. IRELAND.

Hypertrophy of the Brain with Alterations in the Thymus and Supra-renal Capsules [*Wahre Hypertrophie des Gehirnes mit Befunden an Thymus und Nebennieren*]. (*Neurol. Cbl.*, Oct. 16th, 1902.) *At the Meeting at Karlsbad in Sept., 1902. Anton, Obersteiner, Stekel.*

Dr. Anton, of Graz, described a patient who was of a neurotic heredity, had severe attacks of epilepsy, but no symptoms of cerebritis, although there was a certain slowness in spontaneous movements. The intelligence was always good. He died at the age of twenty years in the status epilepticus. The outer vault of the skull was found to be as thin as paper, and even the bones of the base of the cranium were wasted. The occipital curve was flattened. The brain was of strikingly large size, and weighed not less than 2055 grammes. It was thus one of the heaviest on record. The hypertrophy was general, the proportions of the parts being preserved. For example, the cerebellum was 11 *per cent.*, as in the normal brains. The fissures were very deep, but the proportion of the grey and white substance was normal. There was some hydrocephalus internus, though not considerable. The thymus gland was larger than usual; its blood-supply came directly from the innominate artery. The muscular tissue of the heart was degenerated. Anton thinks that this might be the sequel of immoderate dosing with bromides. The supra-renal capsules were invaded by cysts so that the central substance was quite destroyed; the cortical substance remained, though pathologically altered.

Dr. Anton observed that persistent maintenance of the thymus gland and degeneration of the supra-renal capsules are frequently observed along with abnormal brains. In these cases, the cerebral functions are generally impaired. We do not know what relations these alterations

nave to one another. We should bear in mind the powerful constricting capacity of the supra-renal capsules, which might become the cause, not only of monstrosities, but also of other brain diseases, such as congenital hydrocephalus.

Dr. Obersteiner observed that hypertrophy of the brain is a very rare disease. He had a case of it in a boy æt. 8 years. There was no great impairment in intelligence. The brain, without the fluid of the ventricles, weighed 1920 grammes.

Dr. Stekel stated that he had observed in migraine a lowering of temperature to occur with some regularity. The same declension was observed in a case of sarcoma affecting the supra-renal capsules. He holds that the condition of the supra-renal capsules had a significance in migraine.

WILLIAM W. IRELAND.

3. Physiological Psychology.

A Criticism of the Applicability of Plethysmographic Curves in Psychological Questions [Zur Kritik der Verwendbarkeit der plethysmographischen Curve für psychologische Fragen]. (Zeit. f. Psychol. u. Phys. d. Sinnesorgane, H. 5 and 6, 1902.) Müller, R.

This lengthy and able paper presents an interesting study of the historical evolution of the plethysmograph, and then discusses the interpretation of its results. Lehmann's plethysmograph was used. Müller is not, however, like Lehmann, prepared to admit a psychological interpretation of plethysmographic curves, but considers that at present such interpretations are in a high degree confused and uncertain. However simply the plethysmogram may be obtained, its interpretation presents complex possibilities of error which involve some of the most debated points in the mechanism of the pulse. We are therefore yet far removed from the time when we shall be able to give a settled representation of the relations between psychic and circulatory processes. The schemes of C. Lange, Lehmann, and others are, Müller believes, without justification. Before we can take psychic elements into consideration we have, he argues, three different orders of physiological waves to allow for in interpreting the curve of the volume of the pulse: (1) the pulse-wave proper; (2) respiratory waves, and also waves which correspond to, and perhaps are, Traube-Hering waves; (3) S. Mayer's waves, which are of longer periodicity than the Traube-Hering waves. These waves are discussed at some length, and Müller severely criticises the statement of Lehmann that "those oscillations of the pulse which do not depend on the breathing or on muscular movement are of psychic origin." The paper deserves careful study by all who are interested in the psychological applications of the plethysmograph. It by no means follows, however, that the necessity of recognising waves of infra-cortical origin in the plethysmographic curve altogether invalidates psychological interpretations.

HAVELOCK ELLIS.

4. Clinical Psychiatry.

Psychoses among Tramps [*Die Psychosen der Landstreicher*]. (Cbl. f. Nervenheilk. u. Psych., Dec., 1902.) Wilmanns, Karl.

This study is founded on the examination of 120 tramps who reached the asylum from the workhouse of Kislau. Most of them had been on the road for many years; only twelve were women. All but twenty-two had at some time found themselves in prison, and in some cases there had been over one hundred convictions. Considerable stress is placed on the influence of alcohol in moulding the lives of tramps. It usually acts slowly, with increasing dislike of work, loss of will-power, and moral depravity, together with stupid well-being; the irritability and tendency to criminality which have often been marked in adolescence give place to resignation and habits of begging; these alcoholic tramps easily adapt themselves to the routine of the workhouse, and delirium is rare; only when alcohol has produced chronic mental weakness or prolonged insanity do these cases reach the asylum; this occurred in seven cases.

Cases of uncomplicated imbecility were only found three times; but imbecility, the author remarks, is the chief recruiting ground for tramps; he finds two classes of imbeciles among tramps—the erethic group, who have much mental restlessness and moral incapacity, with criminal tendencies which render them an anti-social element; and the anergethic or torpid group, who are marked by a slow, good-natured indifference, not usually leading to active criminality. The erethic imbeciles somewhat resemble the hysterical group also found, often with severe syndromas—paralyses, convulsions, etc.—and a tendency to commit minor offences. The tendency to enter on a life of vagabondage not infrequently accompanies the first appearance of maniacal conditions; this was found in four cases. There were also four similar cases of general paralysis. Epilepsy appears in a still higher degree to constitute a predisposing cause of vagabondage, and this group includes nineteen cases, only one being a prostitute, epilepsy, it is remarked, not leading to prostitution so often as do hysteria and dementia præcox; the epileptics also constitute the group of tramps most willing to work, with intervals of restlessness. The largest number of his cases—as many as sixty-six—Wilmanns places under the head of dementia præcox, and here distinguishes three groups—individuals who were mentally sound until between the ages of twenty and thirty, when they suffered from acute symptoms of insanity, which has left permanent mental weakness or delusions; a second group in which there was no acute outbreak of insanity, but a sudden disturbance of conduct slowly leading up to mental defects or delusions, including characteristic cases of hebephrenia; a third group, definitely pathological from the first, and including the cases of katatonia. The author does not believe that the remarkably large proportion of hebephrenic and katatonic cases which he has found among tramps can be solely accounted for by their mode of life or by the influence of imprisonment, but considers that the congenital mental condition in such cases directly predisposes to an anti-social and unsettled life. The author admits that many of

these cases would by others be regarded as coming under the head of imbecility, but points out that we are not entitled to regard imbecility as a progressive condition ; we can at most regard such cases as imbecility on which hebephrenia or katatonia has been grafted. There were numerous miscellaneous cases : a syphilitic cerebral case, a case of prison psychosis complicated with imbecility, a weak-minded cretin, a typical sane congenital criminal, and five in which the diagnosis remained very obscure.

The author concludes that insane tramps present "a variegated mixture of all possible states of mental weakness." Unlike ordinary habitual criminals, who are more active, they usually show passive weakness of intelligence and will.

HAVELOCK ELLIS.

Plethysmographic Investigations in the Insane [Plethysmographische Untersuchungen bei Geisteskrankheiten]. (Cbl. f. Nervenheilk. u. Psych., Nov., 1902.) Vogt, Ragner.

For some years past, the author has interested himself in the study of the pulse among the patients under his care at the asylum of St. Hans, in Denmark. It is a point to which he does not think that alienists pay sufficient attention, since the variations of pulse frequency are extremely great in many cases, especially when associated with states of fear and anxiety, and valuable indications of the mental condition may thus be obtained. Vogt carried on a preliminary series of observations to test objectively the susceptibility to fright of patients by noting the increase of pulse frequency on hearing a sudden noise (hand clapping), and found that in states of anxiety it was sometimes raised from 70 or 80 to 120 or 126. He has also studied the mental conditions associated with abnormally high pulse frequency. In the case of one very irritable female patient the pulse rose to 216 ; at this pulse-rate the patient's language was always threatening and obscene. It is remarked that coarse and abusive language tends to be associated with a pulse-rate over 150. There is generally motor unrest, but this is not an invariable accompaniment of high pulse-rate. In a paranoid dement lying peacefully in bed, the pulse would be between 80 and 110, and when attention was drawn to his morbid ideas, although he continued to lie quietly, amusing himself by making a few contemptuous remarks, it rose to 180.

The plethysmographic investigations were made with Lehmann's apparatus, a useful modification of Mosso's. The results, duly illustrated by curves, on the whole show similar results to those obtained by Mosso, Lehmann, and others in normal subjects. Slightly imbecile individuals seemed to show great susceptibility to the reactions of fear, which in stuporose cases could not usually be obtained at all. A condition which seems to the author rather frequent in his cases, and even in the sane, is one in which the reactions begin normally and then show a progressively increasing vascular dilatation associated with a condition of shame and confusion at having perhaps given a wrong answer to the questions involving mental calculation put to him ; if the subject continued calculating, the vascular dilatation was accompanied by increased pulse frequency. A very marked change in the plethysmo-

gram of a paranoiac patient was observed on the appearance of an attendant by whom he believed he was persecuted. Vogt remarks that the plethysmograph may be useful when there is a suspicion of the simulation or the dissimulation of insanity. HAVELOCK ELLIS.

Dementia Præcox [*La démence précoce*]. (*Rev. de Psychiat.*, No. 6, June, 1902.) *Sérieux*, P.

This is a very valuable summary of our knowledge concerning Kraepelin's interesting conception of the dementia of adolescence. The history of this disease recalls that of general paralysis, under which were at one time grouped quite a number of different conditions, and conversely to which we now refer a number of cases at one time considered quite unlike in their pathology. For we see that subjects formerly labelled as suffering from various psychoses—maniacal excitement, melancholia, stupor, katatonia, delusional state in the degenerate, primary or secondary mental weakness, primary dementia, etc.—in reality exhibit but various manifestations of a distinct disease, *dementia præcox*, characterised by certain special symptoms and by its evolution. Moreover it is often possible, as in the case of general paralysis, to diagnose the affection in its first stage. Let us therefore give up the idea that dementia præcox is a complication of various insanities (secondary dementia, etc.), but endeavour to diagnose the disease in its early stage and thus obtain valuable data for prognosis.

Reviewing the *history* of the disease, *Sérieux* finds that the first author who carefully studied it was Morel (1857—1860); in more recent times he draws attention especially to the memorable researches of Hecker, Kahlbaum, and Kraepelin, and to important contributions by Christian and Séglas.

Definition.—Dementia præcox is a psychosis essentially characterised by a special and progressive psychical enfeeblement, supervening usually during adolescence, and culminating as a rule in the disappearance of all manifestation of mental activity, without ever compromising the life of the subject. As in general paralysis, we may distinguish in dementia præcox essential symptoms—those pertaining to the psychical enfeeblement; and accessory symptoms—the delusional disorders. The latter may assume all forms.

In asylums the proportion of these cases to the total number of patients probably varies from 5 *per cent.* (Christian) to 15 *per cent.* (Kraepelin).

Symptomatology.—To facilitate description, four varieties may be considered—(a) simple dementia; (b) the delusional form; (c) the katatonic form; (d) the paranoid form.

(a) *Simple Dementia* (mitigated or slight hebephrenia of Christian) is not very often seen in asylums, and is characterised by a progressive enfeeblement of the psychical faculties, usually beginning at the age of sixteen to eighteen years; attention diminishes; comprehension is slow; apathy is a dominant feature. Cephalalgia, changes in temper, vague

fears, hypochondriacal preoccupations may denote the onset. Vagabondage and prostitution are frequently observed.

(b) *Delusional Form* (hebephrenia).—The distinctive characters are delusions, usually polymorphous, the absence of definite katatonic symptoms, and of delusional conceptions tending to become systematised. A prodromal period, frequently unrecognised, often precedes it. There is a mobility, an absurdity about the delusions, a want of precision about the conceptions, a marked variability in disposition, which are striking in these cases. The written and spoken language is markedly incoherent, although different from that of mania, of epilepsy, or hysteria; the grammatical construction is there, but there is a plethora of pretentious, foreign words, of neologisms and senseless expressions. This disorder of speech is found also manifested in the appearance and acts of the patients; their gait is odd, bizarre. Certain physical signs which we find accentuated in the third form may be present in this form. In time these cases settle down into a condition of apathetic dementia.

(c) *Katatonic Form*.—This is the form well described by Kahlbaum, and characterised by peculiar states of stupor or excitement, culminating as a rule in dementia and accompanied with negativism, stereotypy, and suggestibility in the movements of expression and in the acts (Kraepelin). This negativism is manifested by resistance to all foreign interference, to displacement of the limbs, and movements of muscles generally; by refusal of food, retention of urine, etc. Suggestibility is characterised by the katatonic attitudes—"flexibilitas cerea" of muscles, catalepsy, echolalia, echropaxia. Negativism and suggestibility may be observed together, and are the dominant feature of katatonic stupor. Frequently we may observe sudden impulses and outbursts of laughter in the course of an access of stupor. Katatonic excitement differs from ordinary maniacal conditions by the tendency to stereotypy in the language and acts, this "stereotypy" (Kraepelin) being characterised by the abnormal duration of motor impulses; hence the persistent curious gaits, repeated similar movements of the hands, etc., which these patients exhibit. Stereotypy is very frequent in speech (verbigeration) and in writing.

(d) *Paranoid Dementia*.—In this form we get a rapid development of intellectual enfeeblement, with complete preservation of lucidity, accompanied with delusional conceptions, and commonly, too, with sensorial disorders, which are the predominant symptoms for some years. Kraepelin includes in this variety cases with systematised delusions (*Phantastische Verrücktheit*), which most authors look upon as a separate clinical entity (*e.g.*, Magnan's class, etc.). In paranoid dementia, we find ideas of grandeur or of persecution, hypochondriacal delusions, little or non-systematised, more or less tenacious, with slight excitement and auditory sensorial disorders. The delusions may in their extravagance, their mobility, their inanity, equal or even exceed those of general paralysis. The verbigeration, stereotypy, or "jargonaphasia" of the katatonic forms—more or less accentuated—may be observed.

Physical Signs.—In the various forms of dementia præcox may be noted the following physical signs:—Exaggeration (even marked) of knee-jerks; increase in the mechanical excitability of nerves and muscles;

dilatation of pupils; inconstant pupillary inequality; vaso-motor disorders (cyanosis, œdema, etc.); modifications of cardiac rhythm; diminution of temperature; menstrual disorders; enlarged thyroid; exophthalmos; tremors; anæmia, etc. In a certain proportion, we find vertigo, convulsive seizures, hysterical attacks, temporary aphasias, tetany, etc.—more commonly in women. Increased knee-jerks, pupillary abnormalities, and altered cutaneous reflexes have been especially frequently observed by Sérieux and Masselon in their researches. Muscular symptoms are, of course, well exemplified in the katatonic forms.

Termination.—The psychical enfeeblement which supervenes after a few months, or even several years, possesses certain characteristics. Delusions gradually disappear, but traces may remain, stereotyped in form: hypochondriacal ideas, ideas of persecution or grandeur, ill-defined and often very puerile, etc. This weak-mindedness is occasionally only slight, but undoubted when a careful examination is made. In more marked cases it presents itself in one of two forms—*apathetic dementia* and *restless or agitated dementia*. In the latter the salient features are the signs of automatic purposeless agitation—suppressed muttering, declamation of the same senseless phrases, stereotyped questioning, curious, unseemly gait, tics of various kinds, etc. In apathetic dementia may be seen a tendency to stereotypy, but the characteristic feature is the emotional indifference of the patient, an extraordinary apathy, the ruin of all affective, altruistic, or ethical feelings, with a more or less profound torpor and loss of psychical activity (loss of attention, of judgment, etc.). Patients seek solitude, become mute and immobile—the outer world ceases to exist for them. One does not find in cases of dementia præcox the “euphoria” or sentimentality of general paralytics and of organic or senile dementers, nor the morbid emotionalism of the degenerate. In a few, rudiments of psychical activity subsist which bear the stamp of automatism, stereotypy, and puerility; the appetites are gross; patients are vulgar, dirty; many assume stereotyped attitudes (will not sit down, carry their head constantly bent, etc.).

Psychologically, that which differentiates dementia præcox is the weakness of mental images. Hence absence of emotional tone, of tendency to act; the impossibility of fixing the attention; the difficulty of associating ideas or recalling impressions. Masselon sees in dementia præcox a primary affection of the active faculties of the mind; apathy, abulia, loss of intellectual activity—these are the three fundamental symptoms. *Disorders of speech*, so frequent in dementia præcox, are of much interest; *verbigeration* we have noted especially under the heading of katatonic excitement, and *mutism* in katatonic stupor; but one also finds *stereotypy* (the same questions put to all sorts of people, the same exclamations uttered, etc.); “*nigger*” talk; voluntary stuttering; *babbling* and prattling, occasionally unintelligible; *neologisms*; and in some cases a true “*jargonaphasia*.”

Course of Disease.—One may describe three stages—the onset, the development, and the termination. The onset is often mistaken for neurasthenia, hysteria, hypochondriasis, etc., and is vague. The duration of the disease may be ten, twenty, thirty, or even forty years.

Remissions.—These may be observed in the second stage, and especially with katatonic excitement. They generally come on in the first few months, but occasionally even after three years or more. In 20 per cent. of the cases the remission is prolonged, and may be put down as a cure, in spite of the persistence of a few signs. Relapses generally supervene within five years of the onset of the remission—occasionally later.

Prognosis.—While dementia præcox is not as fatal as general paralysis, and does not cause death, its prognosis is grave; mental recovery is rare.

Diagnosis.—Although the physical signs of dementia præcox are not pathognomonic in comparison with those of general paralysis, they are often characteristic enough to enable a careful observer to suspect the onset of a serious disease, and to give a very guarded prognosis in certain cases which appear slight on superficial examination. The signs to be especially noted are: psychical enfeeblement with relative integrity of memory; disappearance of affective feelings, of emotional tone; apathy; puerility; feeble judgment; marked disorder of personality not related to the activity of delusions; the peculiar characters of katatonic excitement and stupor; flexibilitas cerea or rigidity of muscles; suggestibility or negativism; confusion of written or spoken language (verbigeration, echolalia, "jargonaphasia"); the various forms of stereotypy; and the association of such physical signs as pupillary abnormalities, altered superficial and deep reflexes, etc. Simple dementia præcox must be specially differentiated from hysteria, neurasthenia, degeneracy. The delusional form is often mistaken for the insanity of degenerates, or recurrent insanity, or the mania or melancholia of badly developed individuals. The katatonic form must be distinguished from ordinary stupor and cataleptic states in the one variety; from ordinary maniacal excitement, mental confusion, general paralysis, and various toxic and infectious states, in the other. Paranoid dementia is often confounded with Magnan's systematised delusional insanity in the early stages.

In the final stage dementia præcox is to be differentiated from imbecility, presenile dementia, epilepsy, general paralysis.

Pathological Anatomy.—Macroscopically, there is a notable atrophy in the anterior region of the hemispheres; histologically, grave affection of the cortical cells, especially in the deeper layers; destruction of nuclei, increase of large neuroglia cells have been described.

Etiology.—Adolescence is the great factor. Kraepelin found that out of 296 cases, 60 per cent. began before the age of 25 years. Heredity is important. A large proportion of the cases (e.g., 60 per cent.) appear to enjoy good mental health before the onset of dementia præcox. Morel considered that alcoholism in the parents is a powerful factor. Among the determining causes the puerperal state and imprisonment are especially mentioned, more particularly in the katatonic form. Over-pressure has been mentioned by some observers (Christian, Marro).

Pathogeny.—Kraepelin attributes dementia præcox to lesions of the cerebral cortex dependent upon auto-intoxication, probably of sexual origin; this is practically also Régis's view. But other auto-intoxications than those dependent upon disorders of the organs of reproduction may no doubt determine it. Christian classifies it with the group of psychoses due to exhaustion. There is an interesting contrast between

dementia præcox and general paralysis, that whereas the toxin in the latter affects not only the brain, but also the cerebellum, the pons, the medulla, etc., and is fatal to life; in the former the poison seems to exercise some selective action on the most vulnerable elements of the nervous system—the neurons of the centres of association;—*i. e.*, the poison is apparently selective and specific in its action on certain neurons.

Medico-legal Aspects.—As is the case with general paralytics, the subjects of dementia præcox, especially those suffering from a typical and simple dementia, are often prosecuted for various offences. One must bear this affection in mind, especially in the case of young soldiers; and one must not forget that, as various extravagances are characteristic of the condition, it is important to exclude it before dubbing suspicious cases “malingerers” or simulators.

Treatment.—Organotherapy has given no good results. Re-education of suitable cases seems to be indicated. H. J. MACEVOY.

On the Question of Dementia Præcox. (Journ. of Ment. Path., vol. ii, No. 4.) Serbski, Vladimir.

This is an abstract by the author of a paper published in the *Journal S. S. Korsakova*, Nos. 1, 2, 1902, and read at the second Congress of Russian Psychiatrists, January, 1902. It is especially concerned in refuting Kraepelin's conception of dementia præcox. To begin with, as one and the same disease may lead to various and different terminations, Serbski considers it impracticable to base any classification on the factor termination—that is (here), on dementia,—for, according to Kraepelin, this issue is not invariable—some cases recover. The general characteristics of the disease, as they are given, impress one as being markedly vague; such qualifying adjectives (which occur often in the description) as “generally,” “often,” “not infrequently,” “sometimes,” lead him to infer that the signs to which they are applied are inconstant, not essential. Even signs relating to disturbance of attention and impairment of judgment are said not to be invariable, but conditional, in dementia præcox. While there is a close connection between katatonia and hebephrenia, and some cases of katatonia should be classed with dementia præcox, this does not apply to all cases. Katatonia as a syndroma may be met with in the course of various mental disorders. Such objective signs, again, as automatism, negativism, stereotypy, are not pathognomonic of dementia præcox or any given disease; they may be observed in many diseases. Serbski would restrict the name dementia præcox to those forms of mental disorder the fundamental traits of which are: (1) the onset of the disease takes place not later than the adolescent age; and (2) the development into a condition of mental enfeeblement of varying degree takes place rapidly or definitely.

Certain varieties may be distinguished: (a) a slow and progressive psychical disintegration occurs without any acute stage; (b) acute symptoms occur followed by dementia; sub-varieties may be differentiated—Hecker's hebephrenia, the katatonic form, the paranoidal form,—but these often merge one into the other; (c) dementia præcox may be

a secondary manifestation, *i. e.*, secondary to some acute, defined, psychical disease. He does not believe that we can rely on the physical signs described in dementia præcox. The diagnosis of dementia præcox is sometimes very difficult, even when the definition of the disease is restricted as above, and can be made only after a long period of observation; at present, for example, we cannot differentiate between secondary dementia of adolescence and dementia præcox. The theory of auto-intoxication as a cause of the disease is quite alluring, but it cannot be substantiated. The theory of infection with the products of the sexual organs is altogether unfounded. Kraepelin's views on this aspect of the question are refutable. H. J. MACEVOY.

Dementia Præcox and Katatonia [Démence Précoce et Catatonie].
(*Nouvelle Iconographie de la Salpêtrière*, 1902, No. 4.) Séglas, J.

Reviewing briefly the work of Kahlbaum, of Hecker, of Finch, Kraepelin, etc., on the subject of katatonia, Séglas insists on the importance of differentiating the affection katatonia proper from the katatonic state, the neglect of which accounts for a good deal of difference of opinion on the question. The conclusions of Finzi and Vedrani, in the present state of our knowledge, appeal to him most: (1) The syndroma katatonia is observed more or less pronounced in many mental diseases. (2) It never constitutes alone the clinical picture; it is not the whole of the disease, but only occupies certain phases of the morbid process. (3) It is most complete and most lasting in cases of juvenile dementia which have a good deal of analogy with hebephrenia. But it is most important to be clear and precise as regards the essential features of katatonia. According to some authors it is synonymous with tonic spasm of certain groups of muscles; the general opinion among French alienists is that katatonia denotes the cataleptiform states in the insane. These views are not comprehensive enough.

The principal phenomena of katatonia are stereotypy of attitude, speech, acts; tendency to cataleptic immobility—culminating in tension of muscles and almost tetanic rigidity—more or less permanent and pronounced. Resistance of the patient, refusal of food, mutism, Kahlbaum's negativism, are also included under this heading of tension, and rigidity or spasm. Certain other phenomena, which at first sight seem to be the opposite of negativism, belong to katatonia; such are catalepsy, echolalia, echopraxia. This second group of symptoms is not so important as negativism, but their affinity is well shown by their co-existence or succession in the same individual. Another important symptom—for, according to some authors (Somner), it constitutes the fundamental tendency, whence proceed all the other katatonic phenomena, from catalepsy to negativism—is stereotypy.

Katatonia may be present, as is well recognised in such varying mental affections as melancholia, circular insanity, amentia, toxæmic states, senile dementia, general paralysis, hysteria, etc., but it is generally partial and only transitory. It is in certain forms of dementia præcox that we observe it in its full development and with a marked character of persistence. The full notes of three interesting and typical cases of

the katatonic form of dementia præcox, with illustrative plates, are given, and bring out these points very well.

Séglas shares Kraepelin's view that the symptoms of katatonia are psychical in origin, as opposed to Kahlbaum, who looked upon them as simple muscular spasms. An important characteristic is that they are automatic, independent of the consciousness of the patient, unrelated to delusional ideas or hallucinations; but, adds Séglas, such phenomena of automatism can only be corollaries. The primary condition, which constitutes the substratum, is the permanent or temporary (and partial or generalised) insufficiency of cohesion between the various elements which constitute the aggregate personality; it is the defect of unity, of synthesis, of voluntary activity; it is *abulia*. In conclusion he shows that negativism and stereotypy, etc., are quite compatible with the existence of abulia, and refers briefly to the psychopathology of dementia præcox—a subject carefully treated by Masselon (*Thèse de Paris*, 1902).

H. J. MACEVOY.

On the Fundamental Nature of the Delusional Ideas of the Insane.
(*Journ. of Ment. Path.*, vol. ii, No. 3, April, 1902.) *Ferrari.*

The author holds that a sharp distinction is to be drawn between "delirious ideas of the insane proper and those caused by intoxications or infections." In the latter the impure blood circulating in the brain "gives rise to a number of mental images and ideas which, while spurring on one another, are unsystematised," while "in the insane the ideas always have an intimate bearing on the personality itself." A short summary of the psychic symptoms in a number of the commoner drug-intoxications is given in support of this view. The argument appears to imply, though this is not made quite clear in the translation, a rather arbitrary denial of the influence of the organic personality in the toxic deliria.

W. C. SULLIVAN.

5. Sociology.

Medico-legal Report on Vidal, the Murderer [*Vidal, le Tueur de Femmes: Rapport*]. (*Arch. d'Anthropol. crim.*, Nov. 15th, 1902.)
Lacassagne, Royer, Rebatel.

Nearly the whole of this number of the *Archives* is occupied with an elaborate report on Vidal, the result of observations carried on in the prison at Lyons during six months. So careful and scientific a report must lead every English reader to view with regret the casual and summary methods, carried on with mediæval secrecy, which alone are permitted in our own country.

Vidal was born at Vals in 1867, the only survivor of four children. His father died young, apparently of tuberculosis, of which also many of his family died. His mother, though herself healthy, was the daughter of an epileptic, whose sisters were also epileptic. An elder brother of Vidal, who died before him, was of unbalanced temperament,

a fine talker, but without doubt a rascal. Vidal was a posthumous child, and his mother had been worn out during the pregnancy by sick-nursing and sleepless nights. He had convulsions during dentition, and nocturnal incontinence of urine until puberty. At fifteen he had a severe attack of typhoid, from which convalescence was very slow. He had always been of only very moderate intelligence, was sulky and of a capricious temper, but the fever left him partially deaf and deprived him of memory; he became "almost an idiot." The significance of this illness was undoubtedly grave. At the age of twenty, without any serious motive, he suddenly ran away from home to Paris, where, having no money, he went to a restaurant, ordered an expensive dinner, and was in consequence sent to prison. On liberation, he returned home, but this was only the first of a succession of similar flights. It is clear, Lacassagne remarks, that on the basis of a defective hereditary constitution, the attack of typhoid, occurring at puberty, had profoundly disturbed the nutrition of the nervous system and set up a condition of psychic degenerescence. At the age of twenty-one, we find him engaged in his period of military service, which he seems to have carried out in a satisfactory manner. Having been treated, it would appear, with some severity at home, he showed no inclination to rebel against military discipline. On leaving his regiment, he had a severe bicycle accident, resulting in an injury to the head which left him unconscious for some hours; this traumatic incident seems to have been of some significance. At the age of twenty-four, he began, on the one hand, to make various attempts at suicide by poison, and on the other, to commit thefts, mostly of a trifling character. At this time, however, he received an appointment in the Sudan as overseer of negroes; the blacks under his charge complained of his brutality, and said he was mad, while his white comrades spoke of him as taciturn, sulky, unsociable, and ferociously selfish; "weak-minded, timid, uncommunicative," was the colonial agent's report. Vidal himself complained of various symptoms: frequent bleeding of nose, habitual constipation, trembling of hands and legs, violent nocturnal headaches, noises in the ears. From childhood, he had always shown great nervous sensibility, and was always very easily moved to tears. He presented, it is said, the emotional type of the weak-minded degenerate. His love of animals was extreme; as a boy he could never hurt a fly, and he would not join in catching rats, which he regarded as a barbarous occupation. Moreover this man, who himself committed numerous murders, had an extreme horror of dead bodies, and could never go near a room which contained a corpse. With regard to sexual impulsions, no true perversions existed; as a boy he had practised masturbation to excess; then he became sexually frigid. In character he was very weak, always changing his opinion, and almost without will-power. It may be added that, during the two years he spent in the Sudan, he suffered from malaria, and indulged in alcoholic excesses to the verge of dipsomania.

In 1901, he was at Beaulieu, having failed in every attempt to earn his living, and being no longer able to extract money from his mother. He resolved to obtain money at all costs, took train to Nice, accosted a young prostitute who was unknown to him, accompanied her to her

home, with many precautions to avoid being seen, and at the moment when the girl was lighting the lamp drew from his pocket a knife he had brought with him for the purpose, and stabbed her in the back. She screamed and he fled, without committing the robbery he had planned, overcome by the dread of discovery. The crime was committed with extreme deliberation and caution; there was no hesitation, no mental struggle, no obsession of anxiety, no sudden impulsive explosion, and his memory of the event remained perfectly clear. He returned to Beaulieu, resumed his usual habits, and continued his attempts to earn a living with the same nonchalance as usual and the same lack of success. Ten days later, he committed a second crime, this time at Marseilles, accosting a girl who wore much jewellery, and observing at every point exactly the same precautions as on the previous occasion; he struck the girl at the same moment as before, but she turned, kicked him vigorously, and he again fled. The third crime occurred three days later, at Toulon. This time, instructed by his failures, he adopted a somewhat different method; he spent the night with a prostitute and made an appointment with her for the following day, led her to a deserted spot, struck her a fatal blow in the back, removed her jewellery, took her keys, and (it is believed) returned to her rooms and searched her drawers. A few days later, at the Nice railway station, he watched a shop girl; getting into the compartment in which she sat alone as the train moved out, he killed her with a long knife, threw her body out of the carriage and himself after, dragging the corpse some distance, and returned to Nice, where he slept peacefully. This time, however, he committed an act of imprudence; he hung up in his room his mackintosh, still showing signs of blood, intending to wash it later. This led to his arrest.

Vidal was rather above average height, normally built, without malformation, lean, not muscular, of distinctly unattractive appearance. His head was narrow and decidedly dolichocephalic; the face showed much lack of symmetry. The sense organs were normal, but there was convergent strabismus. The skin sensibility was normal, but there were distinct dermatographic manifestations, the stroke of a pencil leaving an accentuated red line. On the whole the physical signs were unimportant separately, but significant when taken together.

Mentally, he was not highly intelligent, but laziness seemed the chief feature in his character. There were no hallucinations, no delusions, not the least indication of epilepsy,—nothing but mental apathy, the absence of initiative and will. The experts conclude that Vidal was sane, but that there were certain signs of degenerescence, that his crimes were deliberate, and that he must be declared “responsible with a slight attenuation.”

We have to admit, there can be no doubt, that the man whose history has here been very briefly summarised must be regarded as absolutely normal, “sane,” and “responsible,” in accordance with standards which even yet largely rule. One could not desire better evidence than is furnished by this case of the inadequate nature of the conceptions of “sanity” and “responsibility” which are still widely accepted by those who are unfamiliar with the exact study of criminality..

HAVELOCK ELLIS.

The Hereditary Nature of the Occurrence of Twins [*Die Gemität in ihren erblichen Beziehungen*]. (*Virchow's Arch. f. patholog. Anat. u. Physiol.*, B. clxx, 1902.) *Naegeli, Akerblom.*

In a paper filling 210 pages the author, a Swiss physician, now in Geneva, conducts a most laborious review of the inquiries already made by Speyr, Goehlert, and Hellin as to whether the production of twins follows certain families. This can in human beings only be done by studying the records of royal and princely families, which can be traced back for many generations. In following out this method of inquiry it appears that these learned Germans, through imperfect study or want of due attention, have made a number of mistakes which their Swiss critic exposes with unrelenting diligence. He shows that no trustworthy conclusion can be built upon the data which they present. Unhappily, Naegeli's own results are but negative. We are still, he tells us, arranging and classifying our facts. Farther, that we still know nothing about the causes of twins, and will scarcely learn anything in future save by collective investigations through generations.

One difficulty often faces the inquiry about the introduction of a special proclivity into such families—the frequency of intermarriages. This is well shown in considering the family of the Prince of Hesse—Philippsruhe and the Princess Margaret of Prussia. Dr. Naegeli shows in detail that going back six generations the princess has only twelve ancestors out of sixty-four different from those of her husband. In 1896 Margaret, who is the sister of the German Emperor, gave birth to male twins who are still living. Wolfgang von Barby, who died in 1865, appears ten times in the ascending pedigree of the Emperor William, and John George von Solms-Laubach (a twin) perhaps twenty times. Facts collected by medical men show that the tendency to produce twins descends both through the males and through the females of the family.

Dr. Naegeli engages in a detailed work to show the fallaciousness of the genealogies which are used to prove the heredity of insanity. But, though he may assert that there is no greater number of twins or any larger mortality in the princely families which he has investigated, he can scarcely assert that insanity and idiocy are not rife amongst them. The learned critic censures Déjerine, who, in his *Hérédité dans les Maladies du Système nerveux*, presented a table in which he has grouped together all the stigmata and weak traits of the Emperor Charles V, which Naegeli observes is a mere caricature.

Déjerine might, however, reply that he did not design to give a complete portrait of the Emperor, but to call attention to certain neurotic traits, and that his great qualities were known to all readers of history. Naegeli confirms the occurrence of the prominent chin in the house of Austria, which he traces down to Charles VI, the last of the male Hapsburgs.

In conclusion we venture to entertain the hope that with such great diligence and so much learning Dr. Naegeli will yet be able to work out some positive rather than negative results.

WILLIAM W. IRELAND.

Sex and Degeneration [*Geschlecht und Entartung*]. (Halle, publ. by Carl Marhold, 1903.) Möbius.

This is the second of the series of essays which Dr. Möbius is publishing under the general title of *Beiträge zur Lehre von den Geschlechts-Unterschieden*. The work, being mainly one of vulgarisation, claims notice not so much for any new observations which it embodies as for the fresh and original manner in which the author states his views on various questions of the physiology and pathology of sex. As readers of Dr. Möbius are aware, his qualities of clear and forcible exposition do not go without their defects; his work is essentially "temperamentvoll," and his most positive conclusions are only to be accepted with full allowance for the personal equation. This is particularly needful when, as in the present case, he has to deal with matters relating to the intellectual and social position of women, on which questions his orthodoxy verges on the fanatical.

The leading idea of the essay is that all disorders of the sexual personality (*Geschlechtswesen*) are stigmata of degeneracy, sexual inversion, taking the term in the widest sense, being one of the most important of such stigmata. By disorders of the sexual personality the author understands partly deviations from the normal in the primary or secondary sexual characters, and partly deviations of the sexual impulse, such deviations being, of course, in both cases congenital and not acquired.

In the normal, according to the author's ideal, the essential point is the opposition of the sexual characters; the man is soundest when he is most male, the woman when she is most female. And every departure from this standard of extremest difference is to be taken as a condition of degeneracy, a link in the chain which reaches down to the hermaphrodite monster. Obviously the number of such deviations will be pretty considerable; from cigarette smoking to inability or unwillingness to suckle, all sorts of tendencies which Dr. Möbius does not like are thus classed as stigmata of degeneracy. However, doubtless from the nature of the question, which is after all mainly one of taste, the author fails to support his thesis by any definite evidence; he shows no reason why a tendency to decreased sexual differentiation should be regarded as the way of decay rather than the way of progress. And so, when all is said, "stigma of degeneracy" with Dr. Möbius, as with a good many others who employ that overworked phrase, is very often not much more than a mere term of abuse.

Having given us his standard of the ideal human being, the author shortly describes the various forms of somatic sexual abnormality, pseudo-hermaphroditism, hypospadias, cryptorchidism, gynæcomastia, feminism, infantilism, etc. He then touches briefly on the anomalies of the sexual instinct.

Regarding treatment, the view maintained is practically that the sexual degenerate, or rather the degenerate of any sort, is to be accepted as a hopeless incorrigible, and that the proper direction of humanitarian effort should be to prevent his production. Hereditary taint and parental alcoholism, being the two great sources of degeneracy, are, accordingly, the evils to be attacked; and under present circumstances

there is most prospect of good results from a crusade against alcoholism. Fortunately one can agree in this practical conclusion without accepting what would appear to be the author's ideal of a humanity physically and mentally stereotyped, exchanging platitudes in Esperanto, and rigidly suppressing every departure from its commonplace standard as a "stigma of degeneracy."

W. C. SULLIVAN.

Is Alcohol a Food? [L'Alcool est-il un Aliment ?] (Gaz. des Hôp., Jan. 13th, 1903.) Triboulet.

M. Duclaux, in a note recently published in the *Annales* of the Institut Pasteur (November 25th, 1902), discussed a series of experiments made in America by Attwater and Benedict on the nutritive value of alcohol, and expressed his concurrence in the conclusion arrived at by these authors that the saccharine or farinaceous elements in a normal diet could be replaced by an isodynamic weight of alcohol without perceptible effect. In the French scientific world, where extreme anti-alcoholic views have been dominant, M. Duclaux's paper appears to have caused something of a sensation, and his conclusions have been attacked energetically in the medical and even in the lay Press. In the present article M. Triboulet criticises them in vigorous terms, pointing out that they are in contradiction to the results of the large majority of other observers, notably with the recent researches of Chauveau (*C. R. de l'Acad. des Sciences*, January 21st, 1901), as regards the effect of an alcoholic diet on the quality and quantity of muscular work; and further that even those who, like Gley (*C. R. du VIIe Congr. Internat. Antialcoolique*, 1899, tome ii), admit that alcohol is a food, are agreed that the organism only tolerates it in very feeble doses. Moreover the American experiments did not last over more than three or four days, which would be far too short a time to allow conclusions to be drawn as to the ultimate effect of the diet. Finally, Triboulet urges that in such a question it is impossible to separate the abstractly scientific aspect from the practical aspect with which the physician has to do; and that the last word should rest not with the chemist who finds alcohol to be a food, but with the clinical observer who can show that it is also a poison. Even, however, from the purely medical side there appears to be some divergence of opinion, for Boix, in a paper published in the *Arch. gén. de médecine* (January 6th, 1903), endorses Duclaux's views from clinical experience.

W. C. SULLIVAN.

Insanity and Marriage. (Westminster Review, August, 1902.) Wilcox, A. W.

In this extremely interesting article Dr. Wilcox has brought together a number of the most striking facts regarding the influence of hereditary taint in the causation of mental disease, pointing out the measures of social hygiene which ought to be the practical corollaries of such facts. Having shown by clinical and statistical evidence that heredity and drink are the two overwhelmingly important causes of insanity, the author advocates as preventive measures "the prohibition of the marriage of persons with a distinct family history of insanity or alcoholism, the permanent detention of persons after a third admission

to an asylum, and the granting of divorce from the unfortunate victims of incurable insanity or continued drunkenness." The last-named suggestion in particular should be well within the sphere of practical politics, and Dr. Wilcox is able to point to a precedent in the United States, in some of which, *e. g.*, Florida, insanity—"continuous, of at least four years' duration, and pronounced incurable by experts"—constitutes a ground for divorce.

Articles of this kind, where accurate information is given without technical pedantry, should be among the surest methods of educating the public mind as to the prevention of insanity, and it is to be regretted that they are not more frequent in the lay Press. W. C. SULLIVAN.

Political Assassins: are they all Insane? (Journ. of Ment. Path., vol. ii, Nos. 2 and 3, March and April, 1902.) Spitzka, E. C.

The author, who has recently published (*Philadelphia Med. Journal*, February, 1902) a protest against what he terms the "degeneracy chimera," renews his attack in the present paper, dealing with the special point of the supposed abnormality of political assassins.

He takes as his text Régis's definition of regicides in his well-known monograph, "Degenerates of a mystic temperament, who, misguided by a political or religious delirium, complicated sometimes by hallucinations, think themselves called on to act the double rôle of judiciary and martyr, who, under the influence of an obsession that is irresistible, kill some great personage, in the name of God, the country, liberty, or anarchy." The terms of this definition are then criticised in detail. It is pointed out that regicide is an act which arises under extremely different social and political conditions, which has very diverse motives, and is effected in very varied ways. It is quite inadmissible to treat it as a phenomenon of constant character, and to regard political assassins as a uniform group whose mental state can be defined by any single formula. Moreover Spitzka holds that the grounds on which insanity has been attributed to many regicides in history are absurdly inadequate, especially when due account is taken of the moral and intellectual atmosphere of their times, and that in the case of more recent assassins the proof of "degeneracy," "hereditary taint," and so forth has been equally flimsy. At the same time it is admitted that the present tendency is to a predominance of insane over sane regicides.

From the facts ascertainable regarding 277 political assassins, the author has drawn up a number of interesting tables showing the proportion of insane and suicidal assassins, the weapons selected by the sane and the insane, the proportion of successes and failures in the two groups, the fate of the murderers, etc. The ratio of aggregate suicides and insane in the series comes to 19.13 *per cent.*, the insane alone amounting to 13.71 *per cent.* and suicides alone to 6.13 *per cent.* Insane regicides have been relatively much less successful than the sane, particularly with weapons which demand courage and determination; thus they have almost always failed with the dagger, which in the hands of the sane assassin has proved a good deal surer than firearms. The value of the paper is not increased by the political rhetoric with which it is freely diluted.

W. C. SULLIVAN.

6. Asylum Reports, 1901.

Some English County and Borough Asylums.

Derby County.—Dr. Legge notes a curious point in lunacy regulation:

Seclusion was employed in the case of one female patient for two hours. According to a recent definition by the Lunacy Commissioners, seclusion consists in the solitary confinement of a patient before 7 p.m. Owing to a failure of gas in November it became necessary to put a large number of the more dangerous patients to bed at six o'clock. Sixty of them were in consequence technically in "seclusion" for an hour on that occasion.

He took in a patient æt. 93.

Gloucestershire.—The admission of patients from this asylum's gathering ground seems to show a tendency to decrease rather than the reverse, though the accumulated residue increases in consequence of depreciating recovery and death rates.

The Brenty Inebriate Home being situated in the county, a practice grew up of sending those of its inmates who became insane to Barnwood. The inequity of this procedure being represented to the Home Secretary, he took steps immediately to put the matter right. The Local Government auditor took exception to the payment by the Committee of the funeral expenses of attendants dying in the service. In consequence the Committee put themselves within the provision of the Lunacy Law, 1890, Sec. 258, by which a committee is allowed to bury an attendant in ground covered by a contract.

Lancashire (Prestwich).—The subjoined appreciations of Mr. Ley's services, gratifying as they must be to him, will also form pleasant reading to all of our Association, who know how true they are.

By the Committee :

Your Committee cannot speak in too high terms of Dr. Ley, nor can they adequately express their sense of the loss they are about to sustain by his resignation. They, however, know that Dr. Ley's renown is not confined to themselves, but is well known to and appreciated by the whole of your Board, and by a world-wide circle of those interested in matters relating to the care and treatment of the insane. They must content themselves by recording that he is second to none, and they confidently trust that, in the matter of a superannuation allowance, he will receive at your hands the most generous treatment, as an officer of exceptional ability who has served the country most emphatically well.

By the Commissioners :

Mr. Ley's incumbency of the office of Superintendent had extended over many years, and his management of the asylum had always been most able and successful; and we desire on this occasion to give expression to our entire appreciation of the value of his services, in which appreciation we know that all of our colleagues, past and present, who have known Mr. Ley have fully shared. We are glad to learn that the Asylums Board have recognised Mr. Ley's services by a liberal pension, which we trust he may long enjoy.

This huge lunacy machine, with the largest population in the country, continues to exhibit the proofs of its drawing its inmates from an area where turmoil, restless activity, disease, and vice flourish to an extent unsurpassed elsewhere. Alcohol, in one relation or another, was

assigned as a contributing cause of insanity in one third of the admissions, and 50 out of the 112 of this class admitted were females! Thirty-six male and nine female cases of general paralysis came in, while of the total admissions, 104 suffered from acute mania and 132 from acute melancholia, 44 from recurrent mania, 21 from mania *a potu*, 24 from recurrent melancholia, and 14 from puerperal melancholia. The anxiety naturally attached to so many active cases was diluted apparently by the admission of five chronic maniacs and two secondary dements.

A recovery rate of 50·97 is a not unexpected compensation for this anxiety, but a death-rate so low as 6·57 on average residence, under the circumstances, is proof of high medical skill and nursing.

Middlesbrough Borough.—Dr. Pope gives in his report details about the patients' employment, tendencies, etc., such as are usually asked for by Commissioners on their visit. This practice, while it keeps the staff up to the point of showing satisfactory returns under the various headings, also serves to demonstrate the responsibilities connected with the carrying on of an asylum.

He notes two curious admissions :

One woman was admitted for the eleventh time into a fresh asylum. She is an alcoholic. Her daughter being a circus rider, she apparently travels in her train, and when she breaks down is removed to the nearest asylum. Her knowledge of asylums and asylum physicians is extensive and peculiar. A man was admitted with a history of dog-bite, and all the distressing symptoms which we associate with hydrophobia. For a considerable number of days he was a source of apprehension, but proved to be a case of mania in which a curious condition of hysterical terror was set up. Appropriate treatment has brought about his convalescence.

Suffolk County.—Dr. Whitwell continues to show the movements of the year, admissions, removals, and residue on a single chart in a form that seems to us to be the best for ready conveyance of the various elements. We should think that the chart would be perfect if only it could give for comparison the estimated yearly population of the area served by the asylum.

The benefits of boarding out suitable patients (which he considers could be selected from the present asylum population to the extent of 20 *per cent.*) are much pressed on the attention of the Guardians for economic purposes.

An autopsy was performed in each of the sixty-nine deaths, with the exception of one which occurred outside the asylum.

Hertfordshire.—We are glad to see that this county has arranged with Middlesex to exchange ten of its improvable idiots for ten patients of any class from the latter county. We again wish to draw attention to the benefits of such a system, and to repeat that Middlesex has done good service in starting an educational establishment for these cases. It seems difficult to understand why the rating authorities should propose to rate farm buildings and an isolation hospital at a proportion higher than that of the asylum itself. But they attempted this and were defeated on appeal. It is worth noting for use by other new asylums that the final assessment represented a sum equal to 3 *per cent.* on capital cost. The "letting value" of an asylum is

obviously a matter which cannot be fixed by ordinary local experience, so the above adjustment may be kept in mind in other localities.

The Visiting Commissioners congratulate Dr. Boycott on the success attending his arduous work in organising the asylum.

West Riding of Yorkshire (Wakefield).—Dr. Bevan Lewis's report always contains information worthy of note. The most interesting points are the installation of a thoroughly equipped plant for treatment by electricity, and the work of the Stanbury Hall branch for improving the condition of idiots and imbeciles.

With regard to the former Dr. Lewis speaks highly of the use of the sinusoidal current. Twenty-six females of various types (acute mania not being represented) were submitted to daily treatment. Of these, seven, including five chronic melancholics, were in no way benefited. The rest were more or less improved, and 50 *per cent.* recovered under treatment.

So with the electrostatic bath; by the agency of the Wimshurst static machine, of the 6 females and 33 males, together 39 cases, 17 recovered, 14 much improved, and 8 were unimproved.

A Finsen lamp and other improved electrical apparatus were in process of installation at time of the report. Dr. Lewis hopes to give next year an account of substantial results from their use.

With regard to the school, Dr. Lewis reports that not only has the discipline much improved the pupils directly and others indirectly, but that there is ample evidence of the increase in individual intelligence which can be brought about in apparently hopeless cases. He gives details of some of these.

A marked fall in the death-rate from tuberculosis and pulmonary phthisis is reported: from 27.69 *per cent.* of resident population in 1897, to 10.40 in 1900, and 12.58 in 1901. It is mentioned that the death-rate from the same disease is found in Wakefield Prison and in the county generally to be decreasing.

London County Asylum.—We can but renew our former appreciation of the vast amount of work done in and about the care of the insane belonging to the vast population of this area. Whether we turn to the central organisation of the system or to the periphery of asylums, we find evidence of the same determination to carry on the work in a thorough and liberal manner. The system grows, and each new asylum brings some innovation, the results of which will no doubt be added to the general stock of information which is to be found in the voluminous report which we now propose to review. This report is a careful, methodical record which does every justice to those responsible for its compilation, whether in bulk or in detail. The Committee itself shows a bright example of whole-heartedness. When we read of 178 attendances on the part of its Chairman out of a possible total of 208, and of 175 to 205, 174 to 184, 96 to 117, 58 to 60, and so on on the part of other members, some at least of whom have other business demands on their time, we can have no fear of the present high standard of aims and performances being let down in the least. The central staff is responsible for some highly interesting and graphic diagrams, showing

year by year, since the County Council assumed the direction of asylum affairs, the relations of the insane, both residential and incoming, to total general population, to general pauperism, and to accommodation provided. In this connection we get included not only the County Council's own patients, but those belonging to the Metropolitan Asylums Board. Thus we get some comparison between the two classes of patients themselves, and also between the two combined and the general population of the area. This latter most important effect is not obtained in other County Reports, though for each year the calculations can be found in the Commissioners' Reports.

The trend of total chargeability, which had been reduced by a few in the previous year, has resumed its march upwards, the difference for the year being 786 in excess. This is partly explainable by increase of area. The increase is almost entirely in regard to asylum patients, who number 776 more than in 1900. From the figures of this and previous years the Committee consider their anticipation of a yearly increase of 500 to be quite justified, in spite of the temporary check in 1900. The gradual "set" of insane population from workhouse, etc., to asylum, has produced a redistribution in twelve years of 10·71 of the total insane. In other words, a very considerable number of the insane have been deliberately sent to asylums in preference to Caterham, Leavesden, and Darenth, where "rent" and maintenance are considerably cheaper. As far as the extra financial burden thus cast on the ratepayers of London, that is their own concern; but the important lesson here taught should not be lost by those who are eager to reduce the cost of lunacy throughout the country by differentiating habitation and treatment in respect of acute and active insanity on the one hand, and of mental wreckage on the other. If there is any point to be gained by the legislation called for, why should London, with the best-equipped institutions of each class, and with the best means of ensuring proper selection of patients for them, thus deliberately turn its face towards the more expensive form of treatment?

However this may be, the County Council is advised by the Committee to contemplate the provision of a ninth asylum—in addition, we suppose, to the proposed reception-houses which have not as yet been sanctioned by legislation.

They recommend that the new asylum shall be of a modified form of villa type, with central administration buildings, etc. This form seems to be generally adopted now, and we think with justice.

The Committee evidently place great store on teaching of the staff, and set out fully the work done in each asylum towards gaining the certificates of our own or the St. John's Association. We regret to note that at Banstead and Colney Hatch no classes were held during the year under report.

Commutation of emoluments in the case of present officers who have separate residences at asylums has been established, and will be the rule in future.

The weekly maintenance charge to Guardians has risen from 9·4 in 1891 to 11·8 in 1902, being in each case a trifle over actual cost.

The Council continues to bestow superannuations consistently and liberally.

Still dealing with central information, we turn next to the pathologist's report, wherein Dr. Mott enumerates the various items of highly important work carried out in the laboratory. Dr. Mott further gives statistics showing that at Claybury the cases of colitis are considerably lessened. A systematic record of dysentery and diarrhoea at the various asylums has shown that when either was prevalent a great many cases would come from one ward. He thinks that too much care cannot be taken to impress upon the attendants the infective nature of the disease in order to arrest its spread, and thereby prevent its occurring in an epidemic form.

Dr. Mott found, *post mortem*, signs of syphilis in 50 *per cent.* of the deaths from general paralysis at Claybury.

Taking the individual asylums, we note the following :

Banstead.—Several changes in the medical and general staff are recorded, and the Commissioners on their visit made a handsome reference to the retirement of Dr. Claye Shaw. His successor, Dr. Johnston Jones, notes the admission of a large number of "drink" cases, who came in almost convalescent, and would apparently have done as well if they had been left in the Union Infirmary. The death-rate was 7·41 *per cent.*, being the lowest on record since the opening year. Colitis seems to have been absent altogether.

Cane Hill.—Only eight cases of colitis are mentioned by the Commissioners in their report as occurring in fourteen months, of which two were fatal. Mention is made of the serious attack on Dr. Moody by a patient. Sad as such occurrences are, they serve to point out the risks attaching to the management of asylums. We congratulate Dr. Moody on his having recovered. Mr. Clifford Smith, the Asylums Engineer, notes that the installing of a water-softening apparatus has resulted in a saving of one tenth in the consumption of soap and soda in the laundry. He further reports a reduction in the gas bill from £1808 in 1895 to £1040 in 1901. This he attributes in great measure to the judicious use of incandescent burners.

Claybury.—The Committee, in adverting to the resignation of Dr. Emily Dove, record their opinion that in an asylum for the insane there are reasons why it is preferable to return to the old practice of having only male medical officers. Asylum dysentery laid a heavy hand on this asylum, causing twenty-one deaths in 121 persons attacked. Dr. Robert Jones notes the reconstruction of the whole system of drainage, the reduction in the number of beds, and the more stringent isolation of all cases of diarrhoea.

Colney Hatch.—Colitis here also was a source of much trouble, causing twenty-five deaths in sixty patients attacked by the disease. General paralysis caused 34 *per cent.* of the total male deaths, while of the deaths among Jewish male patients only it caused 53 *per cent.* The terrible catastrophe which has so recently fallen on this institution is dealt with in another part of the JOURNAL, but it is right to record here that both the Committee and the Engineer refer with satisfaction

to the installation of a new main and powerful pumps for protection against fire.

Hanwell.—Dr. Alexander states that, as the result of careful inquiry into causation in the admitted cases of general paralysis (fifty-seven male and seven female), a causal relationship between that disease and syphilis was established in about 80 *per cent.* He comments on the continuing increase of cases of melancholia in relation to mania, no less than 44 *per cent.* of the men and 57 *per cent.* of the women falling under the former denomination. The statistics of causation by alcohol which he gives are startling, the admissions having risen in almost equal stages from 15 *per cent.* of males and 8 *per cent.* of females in 1898 to 32 *per cent.* and 16 *per cent.* respectively in 1901, and he thinks that even these figures are far from representing the truth. Dysentery caused 3 *per cent.* of the deaths in either sex, but in almost each instance it occurred in cases broken down in health by age, etc. This fell disease caused death in 40 *per cent.* of the thirty-seven males and 14 *per cent.* in the twenty-seven women attacked. The disease broke out in two wards only, and was stamped out by isolation and disinfection. Until 1895 it was very little known, the last entry in the death register from it being in 1860. From 1895 onwards it has never been absent in any one year; the asylum being during that period in the hands of the builders for improving its light and ventilation. In face of the conclusion as to the potency of overcrowding as a cause, Dr. Alexander notes as a curious fact that hardly a case occurred in an overcrowded ward. He is disposed to believe that our dysentery of recent years is of a different variety from the sporadic dysentery of former days, and he is led to so think by the high infectivity, its tenacious hold on a ward, its stubborn resistance to treatment, its heavy mortality in the broken-down, and its marked tendency to recur (often after a long interval) without any abatement of its original infectivity.

Bexley.—Arrangements are being made for nursing some of the male sick wards by female attendants. Dr. Stansfield, after a sufficient period of experience, has no hesitation in pronouncing in the strongest terms in favour of villas as against barracks for the housing of a large proportion of the insane. The acute hospital villa serves well for the patients admitted. Those who are capable of recovery are retained there until approaching convalescence. As they improve they live more and more in the open air, weather permitting, the meals frequently being served on the lawn. The villas are surrounded by gardens and lawns, and have no retaining fence of any kind.

Of the general paralytics admitted, 74 *per cent.* of the 79 males and 55 *per cent.* of the 20 females had undoubted evidences of syphilis. Even these high proportions are lower than those in 1900. Dr. Stansfield is quite correct in stating, when dealing with alcoholic causation, that it is not so much acute drinking that is to blame as prolonged and secret "nipping." We feel sure that grocers' licences have a good deal to answer for in this relation.

Strict isolation of all cases of diarrhoea (203 slight and 82 severe)

and of dysentery (47) was practised, and they are treated as if they were typhoid, isolation being continued for fourteen days after disappearance of symptoms.

Dr. Stansfield adverts to the murderous, but happily unsuccessful, attempt made on the life of Mr. Manson. The man who made it had a strong criminal history, and had been in penal servitude often and long, and was possessed of exceptional cunning. He had previously laid up a murderous weapon for Dr. Stansfield himself, it being luckily found tied by a shred of handkerchief to the scrotum and held in the perineum. We quite concur in Dr. Stansfield's protest against such gaol-birds being retained in ordinary public asylums.

London (Metropolitan Asylums Board Asylums).—Though these institutions do not technically come within this division of our review it seems to be appropriate to consider their reports here, since they are a very important complement of the lunacy service of the Metropolis. As a matter of fact they contain more than a quarter of institution patients chargeable to London, their population containing a large proportion of those who in other areas would find their home in the county asylum.

The Asylums Committee starts its report with this opinion, which is not only pious but practical :

The scope of our work during the year 1901 has, for the most part, been directed to the proper maintenance of existing institutions and the carrying out of various improvements calculated not only to promote the welfare of the patients, but to produce a greater amount of contentment amongst the staff. This is one of the most important factors in the satisfactory conduct of any asylum, as a contented staff means not only a more permanent staff, but reacts beneficially on the patients, and so conduces to the happiness of the whole establishment.

The improvements alluded to are extended accommodation and homes for attendants, and cottages for those who are married. In view of the epidemic of smallpox the Managers extracted the following opinion from the Local Government Board as to their right to vaccinate patients as a protection :—"It would appear that the consent of the patient may be regarded as implied in adult cases, in cases of the kind in question," but that, as regards children, any arrangements made should not "extend, under ordinary circumstances, to the case of any child as to whom the Managers may have sufficient grounds for supposing that the parent would object." The entire absence of smallpox during the year in all the asylums may be attributed to the steps taken under this wise dispensation.

The Managers speak warmly of Dr. Elliott's services at Caterham, and were allowed to add eight years to his twenty-five years' service for completing his pension, and this on the ground of "peculiar professional qualifications" and of "special circumstances." This gratifying instance of liberality is another evidence of the spirit which possesses most of those who manage asylums, if only they are left to themselves.

Leavesden.—Here, while colitis was found *post mortem* to have existed in seven instances of death, tuberculosis has been the prominent pathological trouble. The Committee, under Dr. Elkins's skilled guidance,

have gone deeply into the question, and have taken serious steps to combat it. The neighbourhood itself is admittedly healthy, but Dr. Elkins points out that his population is drawn from the broken-down wreckage from the poorest homes in London, and is peculiarly liable to infection. The first and most important step taken has been to reduce the normal amount of beds (about 1990) by 220. The tubercular patients have 346 beds allotted to them. For the advanced cases two wards on each side are set apart, affording 100 square feet of floor space to each. The incipient cases are allowed 60 square feet by night and 30 by day.

Rustic shelters have been erected in the airing courts, so that patients may have as much air as possible, independently of the weather. Tubercular patients are not allowed to go to the entertainment hall or to chapel, but special arrangements are made for them in both directions. The males are allowed to work in the garden, but not on the farm, especially near the cows. The latter are naturally objects of the most careful watching and testing. Dr. Elkins speaks hopefully of the results in the future of the above precaution, and of careful medical treatment and diet; and it is right to add that the visiting Commissioners accord credit for the thorough manner in which the war is carried on against this preventable disease, which caused 40 *per cent.* of the deaths in 1901.

Caterham.—Here the evidence of tuberculosis is but little felt, only twelve out of 109 deaths being attributable to it. The general death-rate is very low, being only 5·7 on the average population.

Darenth.—Dr. Taylor makes his last report of this asylum, having been chosen as medical superintendent of the East Sussex Asylum, on which appointment we congratulate him. Concerning juvenile general paralysis he writes :

Six patients died from general paralysis, and of these, four, *i. e.*, three females and one male, were children. Judging from the number of deaths from juvenile general paralysis which have occurred at this institution during the last three years, this disease would appear to be by no means so rare as at one time it was supposed to be, and the fact that the females were in a proportion of three to one, both in the admissions and deaths, is noteworthy. I find, however, that, taking the last three years, the proportion of deaths between the sexes from this disease is more nearly equal, being five males to seven females, which approximately agrees with the conclusion of Dr. Mott that the sexes are affected equally.

He suggests to the Managers the appointment of a pathologist in connection with their asylum. This would be a highly praiseworthy procedure.

At the Commissioners' visit only one bed sore existed in the nearly 2000 patients, many of whom are peculiarly feeble.

Rochester House.—This is a new departure. The house was purchased by the Managers for the accommodation of 150 improvable imbecile children, and Dr. Shuttleworth was appointed Consulting Medical Expert, and now makes his first report. The structural arrangements bring the sexes so close that boys can only be retained until puberty, while there is no such limit placed on the other sex.

Though the existence of the school is too recent for any definite opinion, the result of general observation is that the conduct of those longest in residence shows ample justification of the experiment. Those who show no improvement will be returned to Darenth. Industrial training and horticultural pursuits are, of course, used as means of occupation and learning. Dr. Shuttleworth thinks that when these means have been fully established an industrial colony for those who by age are passed out from Rochester House must come as a logical sequence. He points out the necessity for continued segregation, even of those who have been fully trained, since duty to succeeding generations calls for prevention of all chance of the race being propagated by such beings. Dr. Shuttleworth speaks of the benefit of moral training and the appreciation of simple religious services by the inmates.

Some English Registered Hospitals.

Barnwood House.—We are glad to see that the Pension Fund now tops £12,000, £2838 having been added in the past year out of current revenue. The latter seems to have been considerably in excess of the expenditure, the rates for patients being respectively £3 1s. 3d. and £2 3s. 2d. each week. The considerable surplus was devoted to the above purpose and to new buildings, but was not thereby nearly exhausted, £2400 still remaining.

Bethlem.—The capacity of this hospital is still lessened by the fact of male wards being closed for repairs, and consequently the admissions were fewer in number. Including both voluntary and certified patients, they were 263, being, so Dr. Hyslop reports, about one tenth of all the applications. The voluntary boarders admitted were 33.

The recovery rates were for certified, 52 *per cent.*, and 47·5 *per cent.* for voluntary patients, while the death-rate, calculated on average residence, was 4·58 in respect of the former, and zero for the latter. Of the foregoing total of 263 admissions, 53 paid for board, etc. Over one quarter of the certified patients were admitted on urgency orders.

We note that Dr. Hyslop includes among the forms of mental disease in table xi, delusional, impulsive, and alcoholic insanities, and *folie circulaire*. Clerks and governesses were the classes which stood first among the definite occupations prior to admission.

The Retreat (York).—This report does not contain the usual financial statements, but from Dr. Bedford Pierce's summary we find that, while the average weekly income from each patient was £2 8s. 10d., the expenditure was £2 8s. 4d. The lowest rate for unassisted patients had to be raised by six shillings to £2 8s. per week on account of increased cost of maintenance. Four deaths followed a residence of over forty years in each case. Dr. Pierce has installed electrical treatment and also classes for Swedish gymnastics, and as far as matters have gone as yet he is of decided opinion that the latter is a valuable aid to treatment.

Extensive arrangements are made for training nurses, who now are taken on a four years' agreement. At the end of two years they are

expected to enter for the Association certificate ; at the end of the third year they have to be examined again for the Special Retreat certificate and "William Tuke" medal, which is bestowed after a fourth year of private nursing. They are specially instructed in medical gymnastics, massage, and invalid cooking.

Some Scottish District Asylums.

Fife and Kinross.—Dr. Turnbull presses the boarding-out system in every possible way, and was enabled to plant out seventeen cases with relatives and eleven with strangers. They are frequently sent out "on pass" for twenty-eight days to see how the trial results. Experience soon shows that the result of the trial depends not only on the mental state of the patient, but largely on the capabilities of the receiver. In spite of the vacancies thus created, it is found necessary to build accommodation for 100 more patients, equally divided as to sex. The estimated cost is £135 per bed, which is most reasonable. Dr. Turnbull discusses in a thorough manner the question whether asylum farms pay, and comes to the conclusion that they do, though not always to the amount claimed. The raising of all butcher-meat in his case is a material factor in the farm's success.

Dr. Turnbull speaks in favour of the treatment of incipient cases in mental wards of general hospitals.

In view of the increasing burden of lunacy throughout the country, a proposal has recently been put forward, and has been much discussed, that in general hospitals, such as the Royal Infirmary of Edinburgh, there should be provided wards for the treatment of mental cases. Two objects are aimed at. One is that incipient and transient cases of insanity should be treated in these wards, without requiring to go to the asylum proper, thus avoiding as far as possible the unfortunate prejudice which is still often shown against asylum care and against those who have required it. It is of course evident that, in the absence of special regulations, the cases received could only be those in which the patients submitted readily to treatment, and did not need compulsory detention or restraint in other ways. The other object is that treatment should be obtainable by the poorer classes of the population for those forms of mental disturbance which lie on the border-land between sanity and insanity. In these the patient's condition is such that he may not be properly certifiable for asylum care, and yet may require special treatment; and if he does not get that treatment his illness may easily pass on to active insanity. That the plan of having such wards is practicable is shown by the fact that it is already in use in some parts of the Continent. In asylum work one finds far too often that the best time for the treatment of the illness has been allowed to slip past. Often the "insanity" is said in the admission papers to be of only a few days' or a few weeks' duration; but inquiry shows that the symptoms indicating the commencement of mental disturbance have possibly been present for many months, and have been gradually increasing, while the patient drifted on at home without the means of getting the treatment he required. The step of certifying cases for asylum care, involving as it frequently does their also coming on the public rates for support, is so serious that naturally it is often deferred as long as possible; and so valuable time is lost. In giving the opportunity of treatment for these cases the mental wards of a general hospital would meet a much-felt want, and be productive of good; and it is therefore very desirable that they should be provided. If they receive also some of the transient forms of active insanity, it should lessen *pro tanto* the admission rate of asylums; but as these cases would have been discharged from the asylum on recovery, it is not likely that from that side it would produce much effect in lessening the number of chronic residents.

Glasgow, Gartloch.—Dr. Parker, who has recently assumed the direction of this excellent asylum, holds opinions strongly opposed to this same proposal of treating cases in general hospitals.

With such a large proportion (57·6 *per cent.*) in these classes, a recovery of 40·8 *per cent.* may be looked on as very satisfactory. Apparently this continued large admission rate of those ill over a year is closely related to the increasing tendency on the part of the public to trust their aged and helpless relatives to asylum care. This tendency, though entailing a heavy burden on the asylum, is welcome as a sign of public confidence, and it seems to me a pity that at such a time a movement should be made that might be interpreted by the public as a slur on asylum care and treatment, as though patients could not in asylum hospitals get the same treatment and care as in a general hospital. To get at the cases that are uncertifiable or difficult to certify, an increased use should be made of the law which permits voluntary inmates in asylums under sanction from the Commissioners in Lunacy, and people should be encouraged to come to asylums for the help they feel they need. On the other hand, to keep certifiable cases in wards not amenable to the regulations binding asylums is a course very likely to lead to abuses; but there is nothing to prevent early and non-certifiable cases from being treated in the wards of any general infirmary, as has for many years been done by Dr. Alex. Robertson, of Glasgow, in the town's hospital. This is no new thing, and can be done now as in the past. To form wards for the special treatment of the insane in general hospitals is to label the patients as insane just as much as if they were sent to an asylum. The strongest argument (other than the teaching one) in favour of treating insane folks in a general hospital is lost if there are special wards for the purpose. There should, however, be dispensaries for nervous and mental diseases attached to our general infirmaries, where the mentally ill and their friends could easily and conveniently get the best advice. I am sure that if this were done, and properly taken advantage of, it would assist in keeping down the numbers of the insane, and so relieve the tension in our asylums.

Glasgow, Woodilee.—Dr. Blair has retired from the medical superintendency, and has been succeeded by Dr. Marr. We are glad to note that the Managers, both in his case and in that of Dr. Oswald on leaving Gartloch for Gartnavel, place on record their warm appreciation of the eminent services rendered to their institutions by both gentlemen.

The whole of the male hospital is officered by women, and a "nurse with the advantages of a course of training in a general hospital has been put in charge." Dr. Marr states that the relegation of noisy, dirty, destructive, and suicidal cases to a dormitory has been followed by advantage to themselves and to the quieter patients, who have their bedrooms instead.

Both here and at Gartloch extensive additions are being made in the shape of iron and wood buildings for the treatment of tubercular cases. We are afraid that the recent calamity at Colney Hatch may cause some disquiet on the score of similarity in material.

Considering the gathering ground of these conjoined asylums, the proportion of 7·5 *per cent.* of the admissions is not a high one to show in respect of general paralysis. We are glad to see that Dr. Parker furnishes a table of the probable cause in the general paralytics admitted. Syphilis was established in nearly 50 *per cent.*, hereditary predisposition in nearly 50 *per cent.*, while fourteen out of nineteen had been drinkers. We wonder that other superintendents do not make a special inquiry for instructive report in this direction.

Govan.—In this asylum general paralysis makes even a less mark in
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the admissions, only thirteen cases occurring in 239 who entered ; but no case in all the latter was attributable to syphilis. A large number of male alcoholics (38 out of 143) were admitted and increased the turnover of the asylum, which is a high one, the proportion of admissions to average population being more than 50 *per cent.* The Commissioners advise the authorities to consider whether "in some cases appropriate medical treatment could not be given elsewhere than in the asylum for the short time that is often all that is required to complete recovery of these drinkers."

Notes and News.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

THE GENERAL MEETING was held at the Derbyshire County Asylum, Mickleover, on Thursday, February 12th, 1903. Dr. J. Wigglesworth, the President, occupied the chair.

The following members were present:—Drs. T. Stewart Adair, W. Lloyd Andriezen, Henry T. S. Aveline, Horatio Barnett, Fletcher Beach, Harry A. Benham, C. Hubert Bond, David Bower, A. N. Boycott, George Braine-Hartnell, Robert H. Cole, F. K. Dickson, Charles C. Easterbrook, Francis H. Edwards, G. Stanley Elliott, H. Gardiner Hill, Theo. B. Hyslop, Gerald H. Johnston, J. Carlyle Johnstone, Robert Jones (Hon. Sec.), W. Ernest Jones, Walter S. Kay, Richard Legge, Henry C. MacBryan, Henry J. Mackenzie, S. Rutherford Macphail, W. F. Menzies, Alfred Miller, C. S. Morrison, Gilbert E. Mould, H. Hayes Newington, Michael J. Nolan, Bedford Pierce, Evan Powell, Daniel F. Rambaut, Robert L. Rutherford, J. Beveridge Spence, Bernard Stacey, Rothsay C. Stewart, F. J. Stuart, T. Seymour Tuke, Alex. R. Urquhart, Lionel A. Weatherly, Ernest W. White, J. Wigglesworth, T. Outterson Wood, and David Yellowlees. Visitors: Colonel G. Gascoyne and Drs. E. Collier Green and E. Vaudrey.

Apologies for non-attendance were received from Drs. C. Mercier, A. R. Turnbull, R. Percy Smith, P. W. Macdonald, E. B. Whitcombe, J. F. Briscoe, and H. Rayner.

In the morning the Educational and Parliamentary Committees met, and a Council Meeting was held. The following were present at the Council:—Drs. J. Wigglesworth, H. Gardiner Hill, T. Stewart Adair, Alfred Miller, Ernest W. White, C. Hubert Bond, G. Braine-Hartnell, R. L. Rutherford, David Yellowlees, H. Hayes Newington, J. Beveridge Spence, A. R. Urquhart, Theo. B. Hyslop, Lionel A. Weatherly, Rothsay C. Stewart, and Robert Jones.

At half-past one Dr. R. Legge entertained the members to lunch, at the close of which Dr. Wigglesworth proposed the health of their host, remarking upon the evident popularity of the quarterly meetings of the Association held in the provinces, as evinced by the numbers present.

Dr. LEGGE, in responding, paid a high tribute to his committee and expressed much pleasure in being able to forward the interests of the Association.

Dr. T. OUTTERSON WOOD then proposed the health of Colonel G. Gascoyne, Chairman of the Asylum Committee. This was heartily received, and Colonel Gascoyne responded in cordial terms.

Dr. Wigglesworth presided at the afternoon session. He regretted to announce that Dr. Clouston was absent through a serious and severe illness, that Dr. Macdonald was unable to be present from a similar cause, and that Dr. Mercier

was absent owing to domestic and family bereavement. The sympathy of members was cordially expressed, and it was announced that the Council had requested the Hon. Secretary to convey this to each of the members thus absent.

TUBERCULOSIS STATISTICS.

The PRESIDENT said there was a resolution on the agenda in the name of Dr. F. J. Stuart, concerning the work of the Tuberculosis Committee of this Association. It would be within the recollection of all of them that that Committee presented a report, which was adopted. The accuracy of the statistics which the report contained was challenged, whereupon the Secretary of the Committee wrote to the *British Medical Journal* and accepted personal responsibility for them. He (the speaker) thought that was unfortunate, because every member of that Committee was equally responsible for what the report contained.

Dr. STUART here rose to a point of order. Could the President discuss the question before the resolution had been proposed and seconded?

The PRESIDENT stated that the question was not being discussed, but he had been desired by the Council to make the following statement:—That morning the Council had gone fully into the matter, and found that the expert who, at the request of the Council, had the report and statistics under his consideration, had arrived at certain conclusions, but had not sent in a detailed report. The revised statistics, when obtained, would be presented to the Association and considered in the fullest possible manner. That being the position of affairs at present, it would be seen that the matter was, to some extent, *sub judice*; he would therefore ask whether Dr. Stuart wished to proceed with his resolution.

Dr. STUART expressed his intention to proceed, and moved as follows:—"That a committee be appointed to reconsider and to report on the statistics obtained by the late Tuberculosis Committee of this Association." He said that it had been suggested that whatever criticism was made on the work of this Committee should have been made in the *Journal of Mental Science*. He wished to state that he commented on those statistics in the *British Medical Journal* because that report had been sent out, amongst others, to the Chairman of the Asylum Committee of the staff of which he was a member. He referred at considerable length to the errors in the report which the Tuberculosis Committee had drawn up, and he regarded it as unsatisfactory that the Secretary had accepted full responsibility for the errors. He asserted that each member of the late Committee should be held responsible for the report, and he claimed that a new committee should be appointed to deal with the matter.

Mr. W. ERNEST JONES seconded the resolution.

The PRESIDENT stated he was a member of that Committee, but was only able to attend one meeting. He accepted his share of the responsibility.

Dr. HAYES NEWINGTON moved, as an amendment, that the matter be, for the present, left in the hands of the Council.

Dr. YELLOWLEES seconded this. He thought they were indebted to Dr. Stuart for pointing out the errors contained in the report; he considered, however, it would be wisest to pass the amendment. Now that these mistakes had been brought to light, the Council would take steps to rectify them. It was the duty of the Council to protect the dignity of the Association in every possible manner, and that duty was not going to be neglected.

Dr. MACPHAIL thought that Dr. Stuart was right in bringing the matter forward.

Dr. STUART said that if the Chairman of the Committee had accepted the responsibility for the report instead of the Secretary doing so, he would not have brought the matter up before the Association.

Dr. YELLOWLEES did not think that the Chairman of the Committee would deny responsibility; he believed that the Chairman deplored the errors as much as anyone.

The PRESIDENT, in answer to Dr. Stuart, said that the whole matter had been referred to a statistical expert, and that the corrections would be published in the *Journal of Mental Science*.

After some further discussion the amendment was put and carried by an overwhelming majority. It was afterwards adopted as a substantive motion, no one voting against it.

THE STEREOPLASM OF THE NERVE-ELEMENTS—A STUDY IN NERVE DYNAMICS.

Dr. W. LLOYD ANDRIEZEN read a paper, with lantern demonstration, on the "Stereoplasm of the Nerve-elements—a Study in Nerve Dynamics." After reviewing the older doctrine of the morphological unity of protoplasm, he pointed out that this was succeeded by the modern view of its diversity of structure and function, and exemplified it by lantern-slides of specimens of the central nervous system. He emphasised the view that the neuron, or nerve-element in its entirety, was an individual element embryologically (as shown by His), anatomically (as shown by the work of Golgi, Ramon y Cajal, and others), and physiologically (as shown by various experimental methods relating to velocity of nerve-impulse, reaction-time, etc.). The Golgi method of staining revealed the neuron as an opaque body even to its terminal fibrils and "gemmules." He then showed that the cell-body, by modern methods of staining, seemed to be composed of a reticulo-fibrillar element or stereoplasm and a hyaline substance or hygroplasm. He pointed out analogies in the case of epithelial cells, gland-cells, and muscle-cells in regard to this differentiation of structure, and illustrated the nature of the hygroplasm from observations on the amœba, on leucocytes, and on young cartilage cells. The stereoplasmic network, with its prolongation into fibrils in the axis-cylinders of nerve-cells, seemed to be present even in such lowly forms as the Crustacea, as shown by Retzius with the *intra vitam* methylene-blue method, and it was more marked in the higher vertebrata. His own studies on the brain and spinal cord of the cat, ox, monkey, and man harmonised with this view. (Various slides were shown on the screen illustrating the stereoplasmic structure of the nerve-cells in the spinal cord, cerebrum, and cerebellum as shown by special methods of staining.) The large motor-cells of the human spinal cord, the pyramid cells of the cortex, and the Purkinje cells of the cerebellum showed the structure described. He also pointed out that even in the spinal cord of the freshly killed ox the fibrillar prolongations of the stereoplasm could be shown in cell-processes and within the cell-body. He then discussed certain physico-chemical theories regarding the nature of this structure as contrasted with the hygroplasm, and stated his view that the chief metabolic changes (assimilation of food, the building up of the tigroid substance or Nissl's bodies, and probably also the maintaining of the intra-cellular stereoplasm in a state of heightened functional excitability) were subserved by the hygroplasm. Analogies from other tissues of the body and from unicellular organisms were cited and shown to harmonise with this view. The stereoplasm was thus, both from positive and negative evidence, believed to be the conducting element of the nerve-cells, but it was also more than this, for its structure and its environment were modified in the axis-cylinder as compared with the nerve cell-body itself. To quote a simile from the body politic, he would look upon the hygroplasm as the more mobile and "progressive" element, and the stereoplasm as the more "conservative" element. He concluded by pointing out that Herbert Spencer in some of his remarkable speculations (*Data of Biology*) had come very close to the general view which the lecturer had just propounded, and urged that such a view not only gave a philosophical interest to study, but enabled them to understand some of the deeper problems of neurology and psychology. He also briefly described observations in cases of insanity (chronic alcoholic insanity, epileptic insanity, and general paralysis of the insane) in which he found marked and extensive destruction of the stereoplasm within the cell-bodies of the cortex, and hoped that alienists and other investigators would devote special attention to the study of this most important constituent of the nerve-elements.

Dr. ERNEST WHITE read a paper entitled "The Care and Treatment of Persons of Unsound Mind in Private Houses and Nursing Homes" (see page 245).

Dr. OUTTERSON WOOD read a paper entitled "Lunacy and the Law" (see page 260).

The discussion on these two papers was adjourned until the next General Meeting.

The members dined together in the evening at the Midland Hotel, Derby.

SCOTTISH DIVISION.

A meeting of the Scottish Division was held in the Hall of the Royal College of Physicians, Queen Street, Edinburgh, on Friday, December 5th, 1902. The following members of the Association were present:—Drs. Clouston, Yellowlees, W. W. Ireland, John G. Havelock, J. Carlyle Johnstone, George M. Robertson, A. R. Turnbull, John Keay, R. B. Mitchell, E. R. Wilson, J. M. Rutherford, C. C. Easterbrook, R. D. Hotchkis, J. H. Macdonald, J. Carswell, W. Ford Robertson, and Lewis C. Bruce (Secretary).

A letter of apology was received from Dr. Watson.

Dr. Clouston was called to the chair.

Dr. YELLOWLEES.—In proposing Dr. Clouston for the chair I have the very pleasant duty of congratulating Dr. Clouston upon his appointment to the Presidentship of the Royal College of Physicians, Edinburgh. I also take this opportunity of thanking the College through their President for their kindness in placing the Library of the College at the disposal of the Scottish Division of the Medico-Psychological Association for the usual Autumn Divisional Meeting. (Applause.)

Dr. CLOUSTON.—I beg to thank you, gentlemen, for your congratulations, and, as President of the Royal College of Physicians, I can say that we have always been pleased to have the Scottish Division of the Medico-Psychological Association as our guests whenever they desired to hold a meeting in Edinburgh.

The SECRETARY read the minute of the last meeting, which was approved of.

The CHAIRMAN.—The next business is to consider the amended and revised rules of the Association as submitted to the Annual Meeting at Liverpool and by resolution referred to the Divisions.

The following resolutions were carried:

1. Rule 28.—Each Division shall nominate annually to the Council, after taking the vote of the Division, a member to act as Secretary to the Division, and also one member as their representative on the Council, who shall remain on the Council for three years; such nomination to be received by the Council and presented to the Annual Meeting.

2. Rule 34.—To delete the words "and two Auditors."

3. Rule 46.—To delete the words "by the Auditor," and to substitute the words "by two Auditors appointed by the Council."

4. Rule 35.—After "the Educational Committee" insert "and the Divisional Secretaries."

5. Rule 51.—Between C and D add, as a fresh paragraph, "the names of the Secretary and the Member of Division nominated for the Council."

6. Rule 67.—To insert between the word "year" and the word "and," the following:—"Unless he can satisfy the Council that his absence has been unavoidable."

7. Rule 77.—That it should read thus:—"Except in the case of a Divisional Representative, in which case the Council may elect a member on the nomination of his Division."

8. That in the opinion of this Division a Nomination Committee ought to be appointed, consisting of the President, Treasurer, one of the Editors, the General Secretary, and all the Divisional Secretaries, to whom it shall be remitted to nominate persons for all the offices in the Association, except where the nominations are made by the Divisions.

9. That the Ordinances of the Association should be divided into Articles and Bye-laws.

10. That all the rules passed since the last revision should be submitted to the next Annual Meeting.

A hearty vote of thanks was accorded to Dr. Carlyle Johnstone for his valuable assistance in the discussion.

COMMUNICATIONS.

Dr. BRUCE read a paper entitled "Bacteriology and Clinical Investigations in some Acute Cases of Mental Disease" (see page 219).

At the conclusion of this paper Dr. Ireland took the chair.

Dr. URQUHART read a paper on "Nomenclature of Diseases" (see page 236).

On the motion of Dr. TURNBULL, a hearty vote of thanks was accorded Dr. Ireland for presiding during the latter part of the meeting.

IRISH DIVISION.

A meeting was held, by the courtesy of the President and Fellows, at the Royal College of Physicians of Ireland, Dublin, on January 28th, 1903. Present:—Dr. Oscar Woods in the chair, also Drs. Drapes, Norman, Hetherington, Nolan, O'Neill, Eustace, Leeper, Finegan, and Dawson (Hon. Sec.). Intimations of regret at being unable to attend were notified from Drs. W. Graham, Oakshott, Maloney, and Cooke.

The minutes of the previous meeting were taken as read, confirmed, and signed.

Dr. CONOLLY NORMAN asked permission to bring forward the following resolution, not on the agenda paper, which he proposed in suitable terms:—"The Irish Division of the Medico-Psychological Association assembled at their stated meeting this day desire to convey to their esteemed colleague, Dr. Seward, of the Colney Hatch Asylum, the expression of their warmest sympathy in the trouble that has befallen him through the calamitous fire in his institution yesterday. Such a calamity must touch every heart, but knowing how much distress it must particularly cause to Dr. Seward, we desire to assure him of our sincere sympathy."

The CHAIRMAN, in seconding the motion, remarked that if this dreadful occurrence were the means of stopping the erection of such dangerous structures as that which had been destroyed—structures to which he believed all superintendents were opposed—it would not be an unmixed evil. The resolution was passed unanimously, and the Secretary was instructed to send a copy to Dr. Seward forthwith.

TIME AND PLACE OF NEXT MEETING.

It was decided not at present to fix the time or place of the next meeting of the Division.

DIVISIONAL OFFICERS.

It was unanimously decided that the following names should be recommended to the Council as Divisional Officers for the ensuing year, viz., Dr. W. R. Dawson as Divisional Secretary, and Dr. T. Drapes as Junior Examiner; also that Dr. M. J. Nolan should be recommended for a seat on the Council.

ELECTION OF ORDINARY MEMBER.

The following was unanimously elected by ballot:—Henry T. Bewley, M.D. (Dublin), F.R.C.P.I., etc., Visiting Physician, Bloomfield Asylum; Physician to the Adelaide Hospital, Dublin, etc. (proposed by Drs. W. R. Dawson, C. Norman, and H. M. Eustace).

VOTE OF THANKS.

It was proposed by the Secretary, seconded by Dr. Nolan, and carried unanimously, "That the best thanks of the Division be conveyed to the President and Fellows of the Royal College of Physicians for kindly placing a room in the College at their disposal for the meeting."

HOOR OF MEETING.

The Secretary reported that only a few replies had been received to the inquiries which, as directed, he had made of the members regarding the most convenient hour for the Divisional Meetings. He was directed to write to the members again on the matter, enclosing a reply postcard.

COMMUNICATIONS.

Dr. CONOLLY NORMAN contributed a communication entitled "Notes on Hallucinations" (see page 272).

Dr. DAWSON read a paper entitled "A Case of Hebephrenia" (see page 303).

DINNER.

Some of the members dined together at the Jammet Hotel, Dublin, in the evening.

PARLIAMENTARY NOTES.

The King's Speech in opening Parliament this year contained no mention of lunacy legislation.

THURSDAY, FEBRUARY 26TH.

Lunacy in Ireland.

Mr. CLANCY asked the Chief Secretary to the Lord Lieutenant of Ireland whether, in view of the increase in lunatic asylum charges in Ireland in recent years, he would consider the expediency of appointing a select committee to inquire into the cause or causes of the growth of local expenditure on lunatic asylums in that country, and to consider whether any means could be found of limiting or reducing the burden on Irish ratepayers which was involved.

Mr. WYNDHAM replied: The statistics of insanity do most unfortunately show an increase in the numbers of the registered insane. This increase is not confined to Ireland. There has necessarily been a corresponding expansion in the contributions from local rates and from Parliamentary grants for the provision of accommodation for the insane and for their maintenance. The proposal in the question has already been dealt with in the Reports of the Royal Commission on Local Taxation, and I see no reason for further investigation.

TUESDAY, MARCH 3RD.

Mental Derangement.

Dr. FARQUHARSON asked the Attorney-General whether the Government would consider proposals to legalise in England a system similar to that which was in operation in Scotland for the private care of persons showing symptoms of incipient mental derangement who could not be certified as insane.

Sir ROBERT FINLAY replied: The Government has already assented to the principle of such legislation, and a clause dealing with the subject was contained in the Lunacy Bill of 1900. That Bill was introduced by the Lord Chancellor into the House of Lords at the beginning of the session and was passed; it came down to the House of Commons on March 8th, 1900, but had to be withdrawn on July 16th.

THURSDAY, MARCH 5TH.

Treatment of Harmless Lunatics.

Mr. HAMMOND asked the Chief Secretary to the Lord Lieutenant of Ireland, having regard to the restrictions placed upon boards of guardians in Ireland in the treatment of harmless lunatics, if he would favour the proposal for the assimilation of the law in Ireland to that in Scotland, under which it is practicable to have these persons boarded and cared for in the homes of the peasantry.

Mr. WYNDHAM replied: The question of making better provision for the treatment of harmless lunatics in Ireland is receiving consideration.

ABERDEEN ROYAL ASYLUM. DR. ALEXANDER ASSAULTED.

At a Sheriff and Jury Court lately, a patient in the Royal Asylum appeared on a charge of having assaulted J. T—, at the farm of Knaven, New Deer, on August

15th, by compressing his throat, and throwing him to the ground, and also of having assaulted John Mitchell. Prisoner was further charged with having assaulted Dr. H. De Main Alexander after he had been placed in the asylum, and further with having assaulted William Morrice, head attendant, and lacerated his face. Mr. S. D. Fowler, solicitor, who appeared for accused, examined Dr. Alexander; Dr. Reid, Superintendent, Aberdeen Royal Asylum; and Dr. Angus, of the Royal Infirmary; and their evidence showed accused was of unsound mind and dangerous. The Sheriff ordered him to be detained during His Majesty's pleasure.—*Dundee Advertiser*.

Criminals may be refused by Royal Asylums under Lunacy Acts, and this seems to have been the best way of dealing with a highly dangerous patient.

AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION.

The American Medico-Psychological Association having become affiliated with the Congress of American Physicians and Surgeons, it is obligatory under the constitution and bye-laws of the Congress that the Association hold its meeting in 1903 and every third year in Washington. The Council has therefore instructed the Secretary to issue this notice, changing the place of meeting from Providence to Washington, and fixing the dates, May 12th, 13th, 14th, and 15th of this year.

SOCIÉTÉ MÉDICO-PSYCHOLOGIQUE DE PARIS.

We observe that Dr. Paul Tollin and Dr. René Semelaigne have retired from the joint secretaryship in favour of Drs. Blin and Dupaix, of the Vancluse Asylum.

OBITUARY.

Dr. T. Giné y Partagás, the *doyen* of Catalanian alienists, ended on February 27th last his long and active career. Born in Barcelona in 1836, he completed his studies at the Faculty of the same town about 1858, retiring afterwards to Calva, a hamlet in the vicinity of Tarragona, where he practised physic for three years. Assisting in the practical classes of the Faculty in 1863, he obtained the Chair of Anatomy in Santiago and Galicia. At last he won the Chair of Clinical Surgery in his native city, later on directing his attention to mental science. With this object he founded the *Phrenopathic Review* (1880), and established the *New Belem Lunatic Asylum*. It was at this time that he made himself known as a mental pathologist. He strove for the improvement in Spanish law regarding moral insanity, and in several *causes célèbres* gave proofs of his great ability. To these labours were united those of teaching psychiatry in his asylum, and writing no inconsiderable works on his speciality. Only the infirmities of age and the progress of a cruel disease could extinguish his vigour of mind. Spanish mental science is now in mourning for this great and irreparable loss.

We mention a few of his more important works relating to psychiatry:

Theoretical and Practical Treatise of Phrenopathy, 1876; *Phrenopathic Letters about Moral Insanity*, 1882; *On the Necessity of Popularising Psychology*, 1883; *Phreniatric Aphorisms*, 1884; *Clinical Hypnotism*, 1888; *A Journey to Cerebropolis* (a scientific novel), 1889; *Mysteries of Insanity* (another scientific and literary work), translated into Italian, 1890; and numerous articles and observations in the *Phrenopathic Review*, *Medical Independence*, and other scientific reviews and publications.

NOTICES BY THE REGISTRAR.

The next examination for the Certificate in Mental Nursing will take place on Monday, May 4th, 1903.

The next examination for the Certificate in Psychological Medicine will be held in July, 1903.

The examination for the Gaskell Prize will take place at Bethlem Hospital, London, in the same month.

Due notice of the exact dates will appear in the medical papers.

For further information respecting the various examinations of the Association apply to the Registrar, Dr. Alfred Miller, Warwick County Asylum, Hatton, near Warwick.

NOTICES OF MEETINGS.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

General Meeting.—The next General Meeting will be held at the Langham Hotel, Portland Place, W., on May 15th, at 4 p.m., and will be devoted to the adjourned discussion on the papers read by Drs. Ernest White and Outtersson Wood at the last General Meeting.

Annual Meeting.—The Annual Meeting will be held, under the presidency of Dr. Ernest White, at 11, Chandos Street, London, W., on July 23rd and 24th next. The Association will be invited to visit the City of London Asylum on July 25th.

South-Eastern Division.—The Spring Meeting will be held, by the courtesy of Dr. Harding, at Berrywood Asylum, Northampton, on Thursday, April 23rd, 1903.

South-Western Division.—The Spring Meeting will be held, by the courtesy of Dr. Benham, at the City Asylum, Bristol, on Tuesday, April 28th, 1903.

Northern and Midland Division.—The Spring Meeting will be held, by the courtesy of Dr. Menzies, at Cheddleton Asylum, Leek, on Thursday, April 30th, 1903.

APPOINTMENTS.

Craig, Maurice, M.D.Camb., M.R.C.P.Lond., appointed Lecturer on Mental Diseases at Guy's Hospital, and Professor of Psychological Medicine to the Royal Army Medical Staff College.

Price, Arthur Thomas, M.B., Ch.B.Edin., appointed Assistant Medical Superintendent at the Hospital for Insane, Toowomba, Queensland.

Pring, H. Reginald, M.R.C.S., L.R.C.P., L.D.S.Eng., appointed Honorary Dental Surgeon to the City of London Asylum.

Savage, G. H., M.D., F.R.C.P.Lond., appointed Consulting Physician in Mental Diseases to Guy's Hospital.

Tuke, Thomas Seymour, M.B., B.Ch.Oxon., M.R.C.S.Eng., appointed Lecturer on Insanity at St. George's Hospital, W.

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JULY, 1903.

VOL. XLIX.

Part I.—Original Articles.

The Changes in the Nervous System in a Case of Porencephaly. By J. O. WAKELIN BARRATT, M.D., B.Sc.Lond., F.R.C.S.Eng.

ALTHOUGH much has been written upon porencephaly, yet detailed descriptions of the resulting alterations in the constituent neurons of the cerebro-spinal axis are few in number. As a further contribution in this direction the present case has been studied, and the changes found have been recorded as far as possible graphically. No attempt has been made to collect together the literature, largely clinical, of porencephaly, as it has been felt that this cannot be profitably done until the minute anatomy of the central nervous system has been placed on record in a much larger number of cases than is at present available.⁽¹⁾

Clinical Account.

Patient is described as being healthy-looking at birth, and delivery is believed not to have been difficult. He remained healthy up to the age of eleven or twelve months, when he had fits, to which his present condition is attributed. Subsequently to the onset of the fits patient's altered physical state mani-

fested itself. No history of any injury at the time of commencement of the fits is obtainable. Patient is not known to have had any illness at this time or subsequently. The fits persisted, and he became an idiot.

When grown up his facial expression was indicative of defective intelligence. He was unable to speak, though he made inarticulate noises, nor could he walk. He was, however, able to waddle about the floor with the aid of the left upper limb. At thirty years of age patient was admitted to the West Riding Asylum. He was then (Fig. 1) of fair height and general development, and moderately well nourished. The head was asymmetrical, the skull being flattened on the right side. The right upper limb was of defective development, the muscles being wasted and the movements of the forearm, hand, and fingers very limited in range; the fingers of this hand could be partly straightened voluntarily. The left upper limb could be moved without difficulty, and appeared unaffected. The lower limbs were both equally wasted, the legs being slightly flexed at the knees, and the feet exhibiting talipes valgus.

Patient had typical epileptic fits. The pupils reacted to light. Internal strabismus was present. The movements of the facial muscles were not defective. Further details respecting the condition of the nervous system are not obtainable. By careful attention patient could be kept clean. The principal visceral lesions were mitral and aortic disease, with left-sided cardiac hypertrophy, and, at the time of death, thirty-two months after admission, left pleuritis.

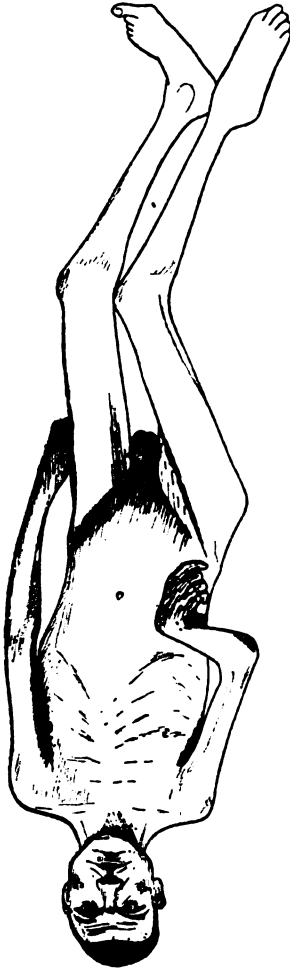
Patient's father died at seventy-five years of age, and patient's mother at seventy, death in each case being attributed to old age. One brother died at forty-two, cause unknown. A second brother, aged forty-three, is in an asylum suffering from melancholia; he has also mitral disease. Another brother has oedema of the legs, recurring at intervals. Yet another brother has swelling of the joints of the hands. The remaining brother is in good health.

Condition of the Body at the Autopsy.

Body emaciated (Fig. 1). The head was asymmetrical, being flattened on the left side, and was small compared

with the face, which was also asymmetrical in correspondence with the asymmetry of the head. The right eye was turned inwards. On the left side of the neck near the angle of the jaw were several old scars, apparently caused by strumous

FIG. 1.



The patient (who was unable to stand) is here represented at full length. The flattening of the skull on the left side is noticeable, as is also the internal strabismus. The face is asymmetrical in accordance with the deformity of the skull. The right upper limb is flexed at the elbow, wrist, and finger-joints, the flexion being accompanied by contracture at these joints; a limited range of movement being still left, however. The muscles of this limb are more wasted than those of its fellow, the difference being especially marked in the forearm and hand. The left upper extremity exhibits no contracture, and could be freely moved. The lower limbs are both about equally affected. There is flexion at the hips and knees, and extension at the ankle-joints. There is extreme wasting of the muscles of the legs, less so of the thigh muscles. With the above exceptions the general bodily development is up to the average.

lymphatic glands. There was disproportionate wasting of the muscles of the right upper limb (including the scapular muscles), which was flexed at the elbow, wrist, and finger-joints. The lower limbs were equally wasted, the wasting being especially conspicuous in the legs and feet; the knees

were moderately flexed, and talipes valgus was present, more marked on the right side than the left. The limbs were flaccid at the time of the autopsy, and exhibited only a limited range of movement at the right elbow and wrist, and at the knees and ankles. Rotatory lateral curvature was present, the upper dorsal vertebræ forming a curve convex to the left. Old scars were found over the back of the right elbow. With the exception of the defective formation of the skull, the right upper limb, and both lower limbs, the general bodily development was fairly good.

The skull was asymmetrical, corresponding in its left-sided flattening to the contour of the head. The skull-cap was thick but not dense, and exhibited no local thickening or thinning opposite the area of defect about to be described. Basal fossæ unaltered in appearance. The dura mater, which was not thickened or unduly adherent to the skull-cap, exhibited a very thin blood-stained pellicle on its inner surface over the vertex on the left side. The pia arachnoid was opaque and thickened both at vertex and base, and was somewhat congested. The subarachnoid space contained much clear fluid.

The brain (1100 g.) exhibited a moderate degree of general wasting of the cerebral convolutions, more marked at the vertex than at the base, and attended with corresponding widening of the sulci, not, however, extreme in degree. The right hemisphere was larger than the left (Figs. 2, 3, 4 A, 4 B, 4 C, 4 D). Nevertheless the convolutions generally were of nearly equal size on the two sides, being somewhat smaller on the under surface of the left temporal lobe, but elsewhere exhibiting no very marked general diminution in size on the left side. There was, however, on the left side a defect in the brain mantle (Fig. 2) in the situation of the operculum, the island of Reil, and the superior temporal convolution, which latter was destroyed except at its anterior extremity, while a relic of its white substance still remained visible (Fig. 4 B). This area of defect was occupied by the loose tissue of the pia arachnoid, the meshes of which were filled with fluid, so that no depression was visible on the surface. Its floor was formed, as Figs. 4 A, 4 B, 4 C, and 4 D show, chiefly by the remains of the white matter, though at the edge grey matter is also present. It is evident that the small size of the left hemisphere is partly if not largely due to the rest of the nervous substance

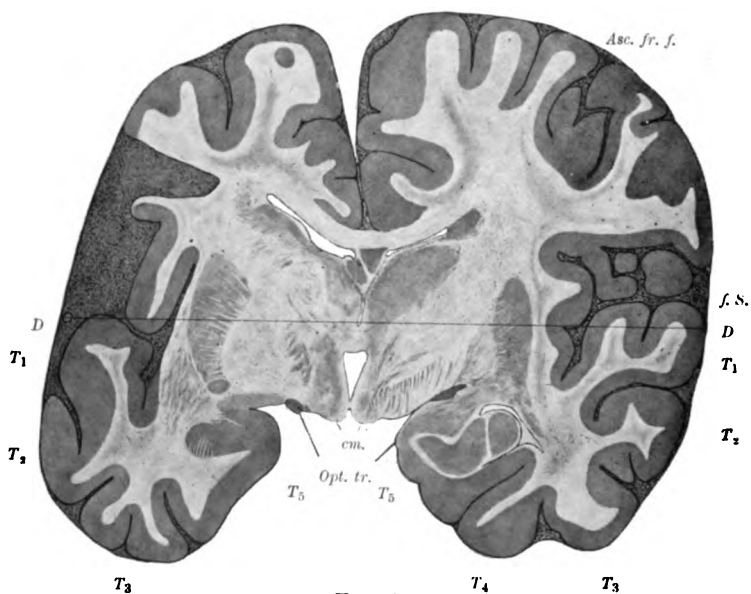


FIG. 4A.

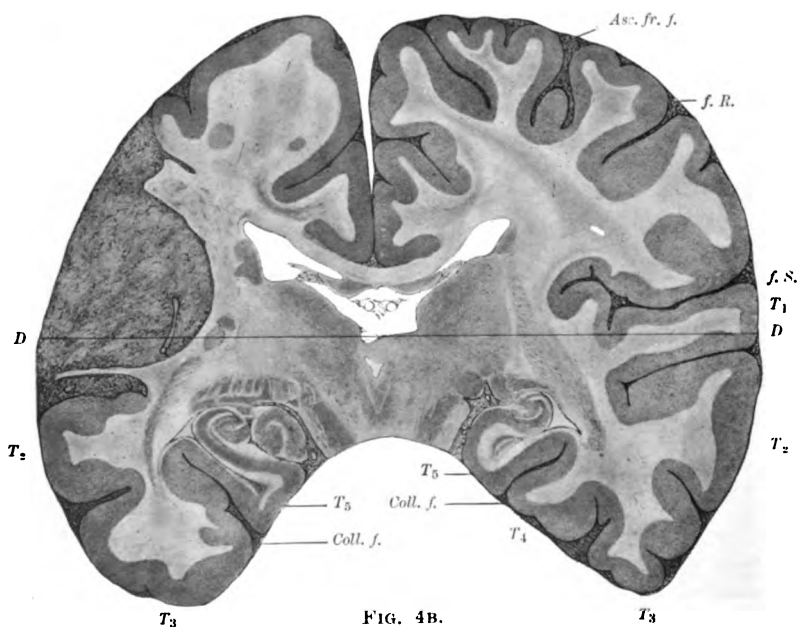


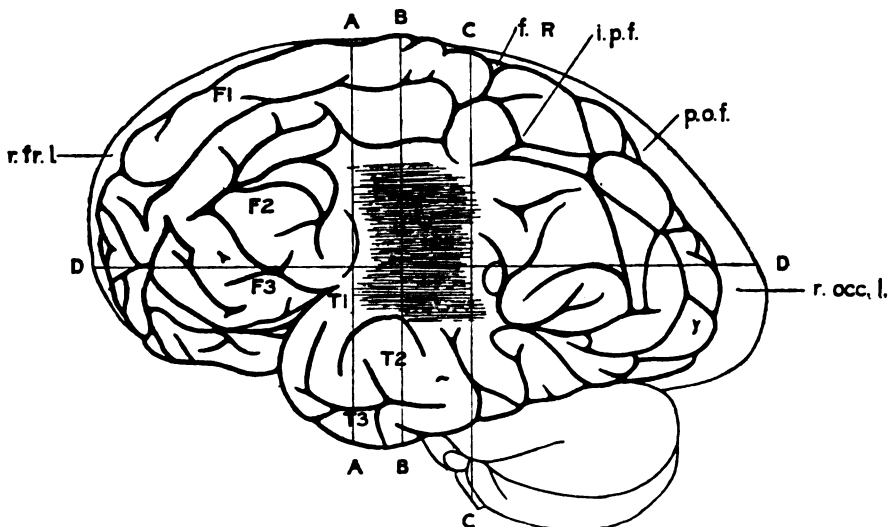
FIG. 4B.

To illustrate Dr. WAKELIN BARRATT'S paper.

of this hemisphere closing upon the area of cortical destruction (cf. Fig. 4 D, in which the third right frontal gyrus is seen to be extending much farther backwards than is usual in the normal condition), the actual limits of which must have been greater than was at first sight indicated by the brain at the time of the autopsy.

An examination of the brain after hardening showed that

FIG. 2.

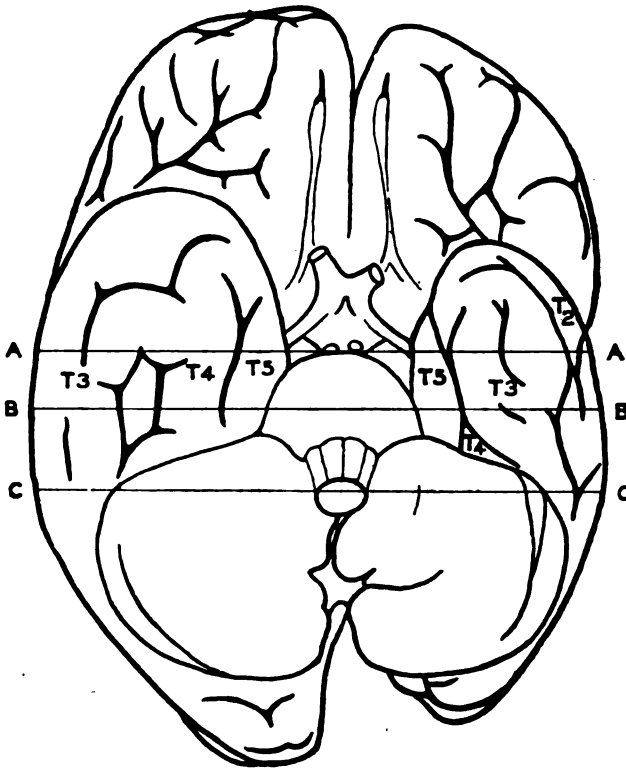


The brain seen from the left side. The left hemisphere is smaller than the right, but its convolutions are in general of good size. In the situation of the operculum and of the greater portion of the first temporal convolution, T1, is an area, indicated by shading, from which the cerebral cortex has disappeared. This area is occupied by the very loose connective tissue of the pia arachnoid, the meshes of which contain fluid. There is no depression on the surface of the brain. The fissure of Rolando and the intra-parietal fissure are represented by *f. R.* and *i. p. f.* respectively. F1, F2, F3; first, second, and third frontal convolutions. T2, T3; second and third temporal convolutions. *R. fr. l.*, right frontal lobe. *R. occ. l.*, right occipital lobe. A A, B B, and C C represent, in this and the succeeding figure, the planes in which the sections shown in Figs. 4 A, 4 B, 4 C respectively lie. D D is the plane in which the section exhibited in 4 D is made. One half the natural size.

the island of Reil had largely if not wholly disappeared on the left side, and that the left claustrum and external capsule were of diminished extent. The left lenticular nucleus was slightly smaller than the right, but the difference was not striking. The caudate nuclei were of equal size. The left optic thalamus

was, however, much smaller than its fellow. This is shown in Figs. 4 B, 4 C; to avoid, however, risk of error arising from possible obliquity of the sections, a horizontal section was made through the middle of the thalami (Fig. 4 D), and the atrophy

FIG. 3.



The brain seen from below. The smaller size of the left cerebral hemisphere, as compared with the right, is much more striking in this than in the preceding figure. The right frontal lobe is slightly bent over to the left. The optic chiasma is also markedly deflected to this side. Notwithstanding the small dimensions of the left hemisphere, its gyri generally are of fair size. The lateral hemispheres of the cerebellum are equal in size. Some asymmetry is, however, visible, the left tonsil projecting to the right (cf. Fig. 5). T 4, T 5, fourth and fifth temporal convolutions. The other letters are as in the preceding figure. Slightly more than one half the natural size.

on the left side conclusively exhibited. The white matter forming the floor of the area of defect on the left side was mottled in aspect. Elsewhere, as the figures show, the white

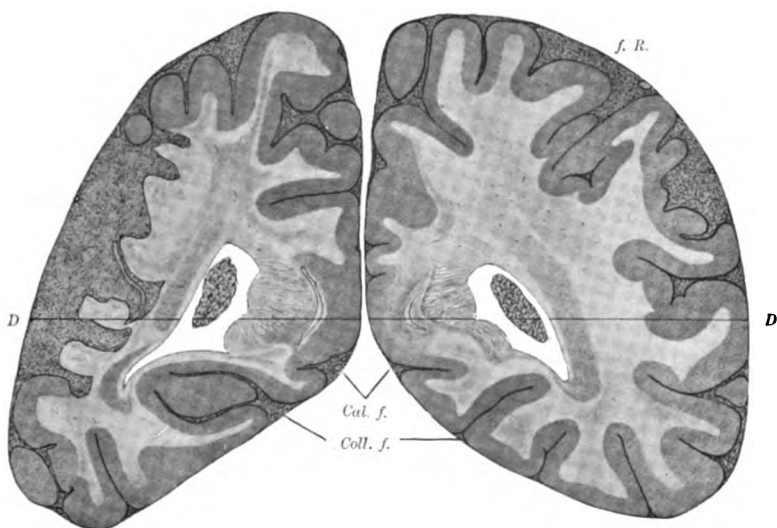


FIG. 4c.



FIG. 4d.

To illustrate Dr. WAKELIN BARRATT'S paper.

was little altered on the two sides. The internal capsule (Fig. 4 D) exhibited in its anterior limb no marked change on the left side. The genu and anterior end of the posterior limb were indistinct on the left side, and the rest of the left posterior limb was much smaller than the corresponding portion of the right internal capsule. The temporo-occipital and thalamo-occipital relations taken together exhibit a diminution in size on the left side (Figs. 4 B, 4 C).

The ventricular cavity of the cerebrum was moderately dilated. Though some asymmetry was present, the lateral ventricles were very nearly of the same size. The choroid plexuses were large. The ependyma was everywhere smooth.

Viewed from below, the difference in size of the two hemispheres was striking. The optic chiasma was bent over to the left. The cranial nerves were all of natural aspect, and equal in size on the two sides. The strabismus from which the patient suffered was not attributable to a lesion involving the third, fourth, or sixth cranial nerves. The mesencephalon shows an atrophy of the left crus. Otherwise the mid-brain is unaffected in its naked-eye aspect.

The cerebellum was well developed. The middle lobe was natural in aspect, and the hemispheres were symmetrical except in respect of the tonsils, of which the left reaches farther posteriorly than the right (Fig. 5). On exposing the tonsils more fully it was readily seen that this asymmetry did not indicate any defect in bulk of the right tonsil. Nor was any one-sided atrophy recognisable in any of the lobes of the cerebellum. The vermis was well developed. The peduncles on the left side appeared of the same size as on the right side.

The pons exhibited some want of fulness on the left side as compared with the right, but was otherwise unaltered in its external characters.

Seen from before, the medulla oblongata exhibited a striking atrophy of the left anterior pyramid, which is less than half as broad as the right (Fig. 6). The olivary eminences are, however, equally developed, as are also the posterior columns and the restiform bodies. The anterior median fissure is displaced to the left of the middle line, and the left olive approaches nearer the median antero-posterior plane than the right.

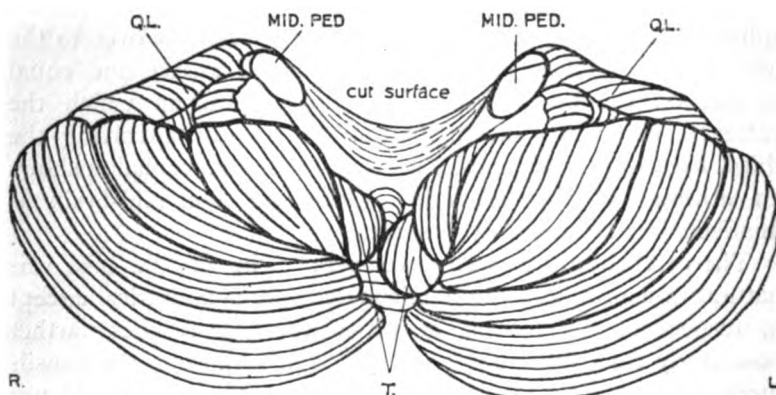
The pia arachnoid covering the spinal cord was somewhat opaque in aspect, and clear yellowish fluid was present in the

subarachnoid space. Beyond this there were no other macroscopic changes to be noted in the spinal cord and its membranes, nerve-roots, and posterior root-ganglia.

The longitudinal, lateral, straight, and cavernous sinuses were patent, the left lateral sinus being larger than the right. The cerebral surface veins exhibited no defect, being equally developed over the two hemispheres. On the left side the anastomotic vein of Trolard was present, and of similar aspect to its fellow.

The left middle cerebral artery was smaller than the right. It presented, however, no occlusion or narrowing, and its four main branches were present and patent.

FIG. 5.



The cerebellum seen from below. The lateral hemispheres are everywhere symmetrical except in the situation of the tonsils, T, the left descending lower than the right. Nevertheless on exposing these structures completely it was readily recognised that the right was quite as large as the left. No other asymmetry is visible, and the lobes of the vermis are natural in size and aspect. Q. L., quadrate lobe. Natural size.

The basal arteries of the brain were free from atheroma.

The right pleura was healthy; the left was covered with lymph 1 to 3 mm. thick, and contained 750 c.c. of blood-stained sero-pus. The right lung (555 grs.) was congested and oedematous, behind and below; the left lung was collapsed and carnified.

The pericardium was thickened; there was about 55 c.c. of clear fluid in the pericardial sac. The heart (365 grs.) exhibited left-sided hypertrophy. The heart muscle was firm and of good colour. The mitral valve was thickened considerably; the aortic valve was also greatly thickened, and was incompetent.

Commencing atheroma was present in the root of the aorta. The coronary arteries were healthy.

The liver was healthy.

The kidneys (right 75 grs., left 110 grs.) were small, and exhibited evidence of chronic interstitial nephritis, the cortex being slightly wasted, and the capsule stripping with erosion of the subjacent tissue.

No morbid changes calling for special note were found in the remaining viscera.

Minute Anatomy of the Nervous System.

Spinal cord.—All the segments of the spinal cord, hardened in a nearly saturated solution of potassium bichromate, were sectioned as far as the fifth sacral segment. The sections were stained by Pal's, Marchi's, and von Gieson's methods.

The right side of the cord was smaller than the left (Fig. 7), the change affecting both white and grey matter in the cervical region, but scarcely at all in the dorsal region below the second segment. On the left side the mesial portion of the antero-lateral column was atrophied. The grey matter was diminished, and the number of its cells diminished on the right side, chiefly in the cervical region. Asymmetry affecting both white and grey matter was present. These changes will now be described in detail.

Commencing with the white matter, reference may first be made to the posterior columns. These, as Fig. 7 shows, exhibited nowhere any change or defect on either side.

On the right side the antero-lateral column was defective, not in its anterior portion, which was well developed, but in the lateral part of its extent. In particular, as a reference to the figure will show, there is on this side, as compared with the left, a narrowing of the portion of white matter lying between the base of the posterior horn and the lateral surface of the spinal cord. This difference is noticeable in the whole length of the cervical region. It is present in a slighter degree in the dorsal and lumbar regions, but is not recognisable in the sacral segments.

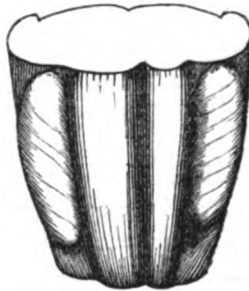
On the left side that portion of the white matter lying between the anterior horn and the anterior median fissure was defective. As Fig. 7 shows, this defect, which was striking in

the cervical region, was continued in the dorsal and lumbar segments, gradually lessening in degree until it became absent in the sacral segments.

There was no sclerosis of the white matter of the spinal cord in any of the white columns.

The right grey crescent was shortened from before backwards in the second and third cervical segments, but there is widening from side to side, and no defect was apparent. Below this level there was, in addition to a shortening of the crescent from before backwards, a defect of grey matter affecting chiefly the anterior horn on the right side, very slight in the fourth and fifth cervical segments, better seen in the sixth, seventh, and eighth cervical and the first, second, and third dorsal segments,

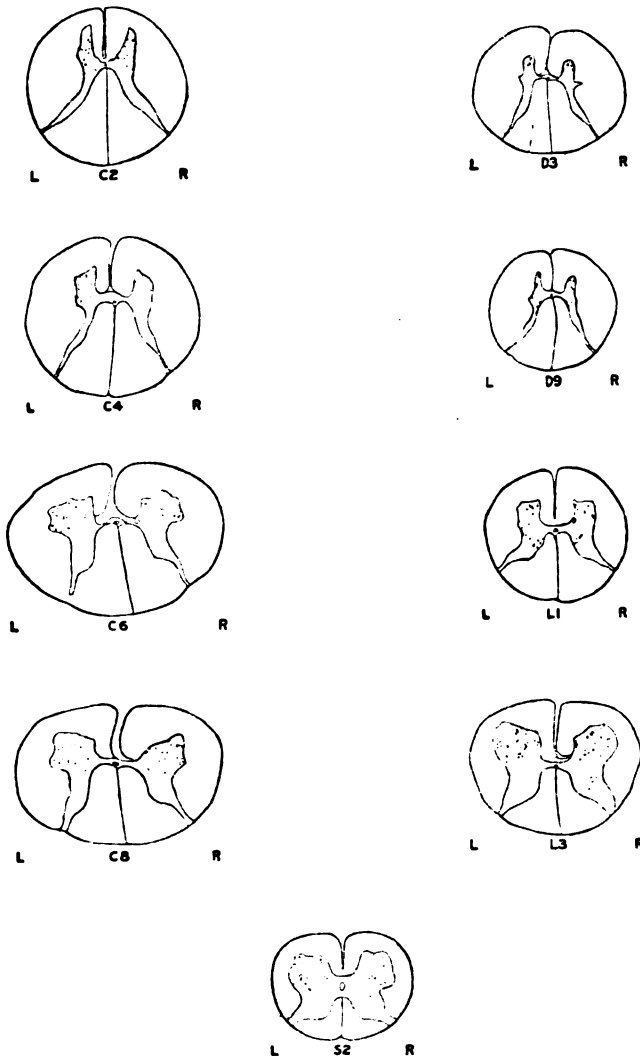
FIG. 6.



The medulla oblongata seen from before. The left anterior pyramid is conspicuously smaller than its fellow, and the anterior median fissure is displaced a little to the left of the middle line. The olives are of fairly equal size, and the medulla is otherwise free from asymmetry. Figs. 8 and 9 represent respectively the lower and upper surfaces of the medulla as here shown. $\times 1\frac{1}{2}$.

becoming slight again in the fourth and fifth dorsal segments; and disappearing or becoming too slight to recognise with certainty in the rest of the cord. This diminution in size of the grey matter was attended with a defect in the number of large cells in the anterior cornua. The latter was not so extensive as the diminution in size of the grey matter, being noticeable only in the sixth, seventh, and eighth cervical and first dorsal segments. The defect was noticed in the lateral cell groups. In the adjoining, and also in the lumbar and sacral segments, the examination of a large number of sections failed to reveal any constant preponderance of cells on one side. The meshes of the grey matter lying outside the base of the

FIG. 7.



Transverse sections of the second, fourth, sixth, and eighth cervical, the third and ninth dorsal, the first and third lumbar, and the second sacral segments of the spinal cord, all drawn to the same scale. Attention should be directed to the diminished size of the left antero-internal column in all the segments as far as the sacral, but chiefly in the cervical and dorsal regions; and to the relatively smaller size of the right half of the cord, the defect involving grey and white matter, the latter being greatest in the situation of the crossed pyramidal tract. The defect of grey matter is attended with diminution in the number of nerve-cells in the lower cervical region. No sclerosis of the white matter is present. Further details are given in the text. R, right; L, left. Stained by van Gieson's method. $\times 2$.

posterior horn were finer in the second and third cervical segments on the right side than on the left. Clarke's column was well seen in the sections, and was of equal size on the two sides.

The asymmetry of the spinal cord in transverse section was caused by the above-described defect in white and grey matter. In the dorsal region below the second segment the atrophy on the one side compensated for that on the other, and there was no inequality in area, though the defects in grey and white matter were readily observed.

Staining by Marchi's method revealed no evidence of recent tract-degeneration. There was much pigmentation of the anterior horn-cells at all levels of the cord.

The pial sheath of the spinal cord remained fairly thin, although opaque in naked-eye aspect, and the septa were not markedly thickened. The anterior septum was distorted, being convex to the left. The blood-vessels of the cord were numerous, but did not show any marked change. At the bottom of the anterior fissure a large vessel on each side, running longitudinally, was frequently seen.

The nerve-roots of the spinal cord presented no marked diminution in size in the cervical region or elsewhere.

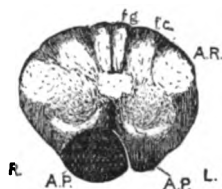
The medulla oblongata.—The study of microscopic sections of the medulla (Figs. 8 and 9) exhibited more in detail what has already been described as the result of naked-eye examination, furnishing at the same time further information as to the condition of those parts of the medulla which were not represented externally. The sections were asymmetrical, this being due apparently entirely to the difference in size of the anterior pyramids, the right being about twice the diameter, and therefore about four times the sectional area, of the left. The consequence of this was that the anterior median fissure was displaced to the left, particularly at the lower part of the medulla just above the decussation of the pyramids (Fig. 8). If, however, the pyramids were neglected it was seen that the medulla was otherwise almost perfectly symmetrical, the most marked difference being that the olive approached nearer to the median septum on the left side (Fig. 9), while at the lower part of the medulla there was also apparently some narrowing of the commencing formatio reticularis on this side.

The olives appeared of fairly equal size on the two sides,

such differences as existed in individual sections (cf. Fig. 9, in which more of the left olive was cut across than the right) not being constant at all levels, and therefore attributable to obliquity in the section. The *formatio reticularis*, the ascending root of the fifth nerve, the posterior longitudinal bundles, and the arciform fibres all appeared developed to the normal extent, nor was any definite alteration to be noted in the size or structure of the various collections of grey matter situated in the medulla.

The anterior pyramids stained by Pal's method exhibited a darker staining on the right side than on the left (Figs. 8 and 9). The nerve-fibres on the latter side were not conspicu-

FIG. 8.



Transverse section of the medulla oblongata, three millimetres below the olivary bodies, and just above the decussation of the pyramids. The medulla is somewhat flattened in front on the left side. The same marked disproportion between the anterior pyramids, A. P., is to be noted as in Figs. 6 and 9, but no marked asymmetry is seen in the arrangement of the rest of the nervous tissue. In the middle line, lying behind the anterior pyramids, is the superior pyramidal decussation, and on each side of this the *formatio reticularis*, between which and the pyramids lies on each side the lower end of the corresponding accessory olivary nucleus. In front of the superior pyramidal decussation is the grey matter surrounding the central canal. Posteriorly are to be noted, proceeding from within outwards, the gracile and cuneate nuclei and the tubercle of Rolando. R., right; L., left. Stained by Pal's method. $\times 2$.

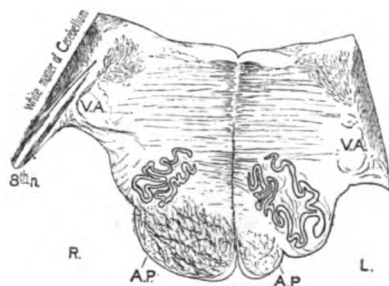
ously smaller than on the former, but were separated by a certain amount of unstainable material. There was, therefore, in the medulla, unlike the spinal cord, some degree of sclerosis of the left pyramidal tract. No such difference in the colour of analogous portions of the medulla, white or grey, was noted elsewhere.

The cerebellum.—There is little further to be said of the cerebellum. Microscopic sections in various parts, particularly the uvula, pyramid, tonsils, and the cuneate and central lobes, were in every respect natural. Sections of the ganglia of the

medullary centre also failed to exhibit any marked change. The restiform bodies and superior peduncles, as mentioned elsewhere, showed no structural change.

The pons Varolii.—Microscopical sections of the pons Varolii exhibited an asymmetry similar to that noted in the medulla oblongata, and, like it, affecting only the anterior part of the section, though to a lesser degree. Beyond the diminished size of the left pyramidal tract there was little further to note. The fillet, the tegmentum, the posterior longitudinal bundles, the descending roots of the fifth nerves, and

FIG. 9.



Transverse section of the upper end of the medulla oblongata at its junction with the pons. The section is asymmetrical, the left side being smaller than the right owing to the extremely small size of the anterior pyramid, A. P., on this side. In this, as in the preceding figure, the right anterior pyramid is more deeply stained than the left. Behind the pyramids, on each side of the middle line, are seen the olivary bodies, the left coming nearer to the median *raphe* than the right; and still more posteriorly the *formatio reticularis*, lying upon which beneath the floor of the fourth ventricle on each side of the middle line the hypoglossal nuclei are situated, separated from the reticular formation by the posterior longitudinal bundles. External to the hypoglossal nuclei lie the auditory nuclei, not well outlined in the figure. Behind and external to the olivary bodies the ascending root of the fifth nerve, v. A., is imperfectly seen, and dorsal to this the restiform body, in relation to which the fibres of the eighth nerve appear on the right side. The portion of the section lying behind the anterior pyramids is asymmetrical, but presents nowhere any clear evidence of defect. R., right; L., left. Stained by Pal's method. $\times 2$.

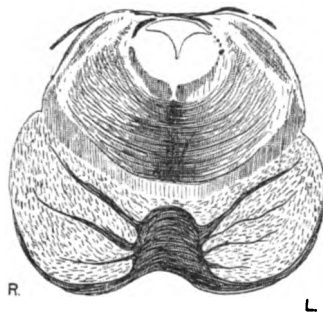
the various masses of grey matter, all alike appeared equal on the two sides and of normal aspect. The various tracts of nerve-fibres exhibited no difference in staining reaction by Pal's method on the two sides; in particular it was not possible to recognise any sclerosis of the left pyramidal tract. So far as could be judged, also, the condition of the larger nerve-cells in

respect of their number, size, and pigmentation was equal on the two sides.

The mesencephalon, thalamencephalon, and prosencephalon.—As these structures were examined together by means of frontal vertical sections, it will be convenient to consider them together.

As regards the mesencephalon, no marked change was noted in the corpora quadrigemina, which were equal on the two sides. The superior brachia were not so well seen as is usual, but were equal on the two sides. The left inferior brachium was present, but was much smaller than the right. The tegmentum, the

FIG. 10.



Transverse section at junction of the mesencephalon and pons. Asymmetry is present, affecting only the anterior part of the section, being confined to the left crus. The remaining structures in the section are well developed, being quite free from atrophy. In the middle line, and penetrating a short distance between the bundles of the crura, are some of the fibres of the upper end of the middle commissure of the cerebellum darkly stained. More posteriorly is seen the fillet, which is prolonged backwards on each side, and is equally developed in the two halves of the section. The lower end of the locus niger, intervening between the fillet and crus on each side, is not shown in the figure. Dorsal to the fillet in the middle line is the tegmentum, between which and the grey matter bounding the aqueduct of Sylvius lie the posterior longitudinal bundles, also of equal size. Still more posteriorly are seen the fourth nerves, decussating in the valve of Vieussens. R., right; L., left. Stained by Pal's method. $\times 1\frac{1}{2}$.

posterior longitudinal bundles, and the upward continuation of the lemniscus were also unaltered, while the grey matter around the central canal, in the tegmentum, and in the locus niger was similar in the two halves of the section. The diminished size of the left crus as compared with its fellow has already been mentioned; no clear indication of sclerosis by Pal's method could, however, be here recognised.

The thalamencephalon, as has been stated above, was wasted on the left side. Frontal sections stained by Pal's method showed that this wasting did not affect the anterior nucleus of the left optic thalamus, which by contrast formed a striking object in the section, from the lower end of which the bundle of Vicq d'Azyr, which was free from atrophy, descended. The mesial and lateral nuclei, and still more the ventral nucleus, of the left optic thalamus were considerably atrophied. Both the grey and the white matter were affected, especially the former. The subthalamic tegmental region also shared in the atrophy, but it was difficult to decide upon the degree to which its individual constituents were involved, as the structures below the left optic thalamus in this region could not readily be subdivided. The middle commissure was present. The mammillary bodies and their tracts were of equal size and similar structure on the two sides. The right optic nerve was of good size and equal development; on the left side von Gudden's commissure was atrophied, but the lateral root was of good development. The external geniculate bodies were of nearly equal size, but the left internal geniculate body was very atrophied and its cells degenerated, while the right appeared much larger than natural.

The lenticular nuclei, as far as could be judged, were equal on the two sides. It was not so easy to compare them as it was to compare the optic thalami, because in the sections the former were found to be much more asymmetrically placed than the latter. Thus in Fig. 4 A, for example, the left lenticular nucleus was larger than the right, while in Fig. 4 D the reverse was the case. Owing to a certain degree of displacement of the lenticular nuclei relatively to each other, it was not possible to cut the two nuclei at the same time in the same position, but so far as an opinion could be formed the lenticular nuclei had escaped, the left not showing any change as the result of the cortical lesion. The various divisions of the lenticular nucleus were well defined on the two sides, and preserved their relative proportion, while no clear alteration of either white or grey matter was discernible.

The left caudate nucleus was also unaffected. The large cells of this nucleus were similar in size and number to those on the opposite side.

Sections of the left internal capsule stained by Pal's method

showed no alteration in the anterior limb, but the posterior limb was narrowed (cf. Fig. 4 D), the diminution in size as seen in sagittal section being greatest in the interval between the optic thalamus and the upper part of the globus pallidus. In this situation, however, there was not, so far as could be judged, any diminution in size of the nerve-fibres, nor was there any recognisable increase of neuroglia.

The condition of the left optic radiation of Gratiolet and inferior longitudinal bundle was, like that of the internal capsule, more readily observed in sections stained by Pal's method than in macroscopic sections of the chrome-hardened brain. Fig. 4 B shows this joint bundle to be defective at the junction of middle and lower third ; microscopic sections showed that the defect involved both constituents, the portion of the inferior longitudinal bundle which was totally absent being greater than that of the optic radiation, while elsewhere the narrowing of the former was similarly greater than that of the latter. This narrowing is not accompanied by any very obvious alteration of the size of the individual nerve-fibres, though, owing to the small size of the latter, observation of calibre is difficult. On the right side the inferior longitudinal bundle was stained darkly, while the optic radiation was relatively lightly stained, this being the relation usually observed when these structures are healthy. On the left side this separation of the two tracts was not everywhere distinct, and when present this relation was reversed, the inner tract being slightly darker than the outer.

The long association bundles of the cerebrum were well developed on the left side only at some distance from the area of defect, and the degree to which they persist may be judged by studying Figs. 4 A, 4 B, 4 C. In the neighbourhood of the cortical defect, as these figures show, a mottled appearance was seen in the white matter. Stained by Pal's method, the white matter was here found to consist in many places of neuroglia quite free from nerve-fibres, or containing such only in very small numbers.

The cortex of the cerebrum exhibited on the left side the same appearance as on the right, except at the edge of the area of defect, where the different layers of nerve-cells became represented by a single layer of cells showing little cell-protoplasm and no distinct cell-processes.

REVIEW.

Further reference must now be made to the nature of the lesion causing porencephaly, and the resulting changes in the central nervous system must be very briefly summarised and criticised.

As regards the nature of the lesion, this was obviously vascular in origin, since it corresponds very closely to the area of distribution of the left middle cerebral artery. This vessel must have been blocked just beyond the point at which the lenticulo-striate branches were given off. Concerning the cause of the blocking, it is not improbable that this was the result of an embolus detached from a cardiac valve exhibiting vegetations, for at the autopsy valvular heart disease of old standing was found ; and there is a family history pointing to rheumatic fever in patient's brother. As, however, the artery was patent at the time of death, though smaller than its fellow, it would appear that the plug did not permanently obstruct the vessel, but that the lumen was subsequently restored, though only after destruction of the corresponding area of the brain mantle had occurred.

Turning now to alternative theories, we may consider first thrombosis of the artery in question, dependent upon localised arterial disease. This appears improbable, since it implies disease at a single spot in a single arterial wall, all the other vessels apparently escaping. Similarly hæmorrhage appears to be excluded by the entire absence of any localised thickening of the membranes of the brain, and again by the affected area coinciding so closely with an arterial area. The latter circumstance is also opposed to intra-venous thrombosis having led to the cortical defect.

The age at which the lesion occurred was probably eleven or twelve months, when the first fits were observed. The few particulars collected respecting the birth of the patient are perhaps not very reliable, since they were obtained at second hand from the patient's brother thirty years later. If, however, the belief expressed that delivery was not difficult be correct, then the possibility of the cortical defect being due to birth-palsy—that is to say, to injury during or resulting from delivery—is negatived, a conclusion which seems supported by the limitation of the cortical area referred to above.

To sum up, all the evidence available points to the cause of the porencephaly being embolism of the left middle cerebral artery occurring towards the close of the first year of life.

Turning now to the resulting changes in the central nervous system, these may be summarised as follows :

1. There was a defect in the brain mantle on the left side involving the operculum, the island of Reil, and the superior temporal convolution. The floor of this area was formed by the remains of the subjacent white matter, which was very defective in medullated fibres. The left hemisphere was small, and had contracted upon the area of defect ; the left temporal lobe, seen from below, was also defective in size. The inferior longitudinal bundle on the left side was defective. As the destructive lesion of the temporal lobe was confined to the superior temporal convolution, it follows that the defective nerve-fibres arose in this gyrus.

2. The caudate and lenticular nuclei were unaffected.

3. The left optic thalamus was atrophied, the atrophy involving the lateral median and ventral nuclei (especially the last), while the anterior nucleus was unaffected. The corpora mammillaria remained intact. The left internal geniculate body was very small ; the right was unusually large. The left optic radiation was atrophied. The atrophy of the optic thalamus was entirely dependent on the cortical lesion, being outside the vascular area involved in the latter.

4. The cortico-spinal and thalamo-spinal tracts coming from the left hemisphere were markedly wasted in the mesencephalon, pons, and medulla in comparison with the corresponding tracts of the other side.

5. The cerebellum was normally developed.

6. The spinal cord exhibited a defect of the left antero-internal column, while the right antero-lateral column was of defective width opposite the base of the anterior horn. There was also diminution in size of the right anterior horn.

Two further points may be referred to in conclusion. The first is that the pia arachnoid was opaque and thickened over both hemispheres, and that the right hemisphere also showed some general wasting. This would appear to be independent of the local cortical lesion, and to be of the same nature as the brain atrophy, attended with thickening and opacity of the pia arachnoid, seen in asylums in epileptic patients not exhibit-

ing porencephaly. The second point is the non-development of neuroglia in the spinal cord in the situation in which the right crossed pyramidal fibres should be found, so that no sclerosis is here recognisable, though a certain amount of sclerosis is to be seen in the medulla oblongata in the left anterior pyramid. This is apparently to be explained by the circumstance that degeneration of the fibres descending from the cerebral cortex and optic thalamus occurred before myelination was complete, and thus was attended with less sclerosis than would occur had the myelinated fibres been fully developed.

(¹) Reference may be made to the cases recorded by Mott and Tredgold, "Hemiatrophy of the Brain and its Results," *Brain*, vol. xxxiii, 1900, pp. 239—264; and by David A. Shirres, "On a Case of Congenital Porencephalus," *Studies from the Royal Victoria Hospital, Montreal*, vol. i, No. 2, 1902. Further references are given in these papers.

FIG. 4 A.—Frontal section of the brain in the plane A A, Figs. 2 and 3. The depth of the area of destruction of the brain tissue of the left hemisphere is shown. Its floor is formed partly by grey and partly by white matter. The chief branches of the middle cerebral artery are readily recognised on both sides. The left hemisphere is smaller in section than the right in this and the two succeeding sections. Owing to the asymmetry of the brain, the section is oblique as regards the basal ganglia and the optic tracts, *opt. tr.* In consequence of this the lenticular nucleus and the tail of the caudate nucleus appear larger on the left side than on the right. The right optic thalamus is much larger than the left; this is in part because the latter is cut more anteriorly than its fellow (cf. Fig. 4 B). Below the corpus callosum lie on each side the lateral ventricles, and in the middle line the fornix. Beneath the fornix lies the third ventricle divided into two parts by the middle commissure. Still lower are seen on each side the corpora mammillaria, *c. m.* On the right side the descending horn of the lateral ventricle is seen. The anterior portion of the left superior temporal convolution, T 1, is seen in the section (compare with Fig. 2). *asc. fr. f.*, ascending frontal fissure. *f. S.*, posterior limb of the fissure of Sylvius. T 2, T 3, T 4, T 5, second, third, fourth, and fifth temporal convolutions respectively. This and the succeeding three sections represent the brain hardened in potassium bichromate. × $\frac{1}{2}$.

FIG. 4 B.—Frontal section of the brain in the plane B B, Figs. 2 and 3. The floor of the area of destruction of brain tissue is now formed by the remains of the white matter, which exhibits, as in Figs. 4 A and 4 C, a mottled appearance. The first left temporal convolution has nearly disappeared, only a portion of its white substance remaining. The section is somewhat oblique in respect of the basal ganglia. The left optic thalamus is smaller in section than its fellow, and the left claustrum is irregular in aspect. Below the corpus callosum are seen the lateral bands of the fornix, external to which lie the lateral ventricles. Lower down in the middle line the supra-pineal recess and veins of Galen are seen, and also the pineal recess, which lies a little to the left of the middle line. Next comes the posterior commissure, beneath which is seen the upper end of the aqueduct of Sylvius. On each side is seen the inferior horn of the lateral ventricle, lying external to the corresponding hippocampal gyrus. *f. R.*, fissure of Rolando. *coll. f.*, collateral fissure. The other letters as in the preceding figure. × $\frac{1}{2}$.

FIG. 4 C.—Frontal section of the brain in the plane C C, Figs. 2 and 3, towards the posterior limit of the area of defect, and immediately behind the posterior extremity of the corpus callosum. The floor of this area is formed by the remains of the white matter. The optic radiation and inferior longitudinal bundle taken together are thinner on the left side below, where a defect is visible at the junction

of middle and lower thirds, than on the opposite side. The lateral ventricles are dilated; within them the choroid plexuses, also enlarged, are seen. *cal. f.*, calcarine fissure. Other letters as in the preceding figure. $\times \frac{1}{3}$.

FIG. 4 D.—Horizontal section of the brain, made in the plane D D, Figs. 2, 3, 4 A, 4 B, 4 C. The section passes through the area of defect. The anterior portion of the left island of Reil still persists, covered by the posterior extremity of the third left frontal gyrus, which passes much farther backwards than on the right side. Posteriorly the splenium of the corpus callosum is seen, with a portion of the lateral ventricle, *l. v.*, containing the choroid plexus, bounding it on each side. In front of the splenium is a portion of the velum interpositum, in which the two veins of Galen lie; and anterior to this, in the middle line, the cavity of the third ventricle is seen. Externally, on each side, lie the optic thalami, the left being smaller than the right. Outside the thalami are the lenticular nuclei; the left is slightly smaller than the right. The caudate nuclei, which lie more anteriorly, are of equal size. The anterior limbs of the internal capsule are well developed on both sides; the left posterior limb is smaller than its fellow, and its anterior end is indistinct. The basal ganglia are somewhat distorted on the left side. Between the caudate nuclei lie the anterior horns of the lateral ventricles, separated by the anterior pillars of the fornix and the septum lucidum, in front of which is the genu of the corpus callosum. $\times \frac{1}{3}$.

Concerning the Significance of Central Chromatolysis with Displacement of Nucleus in the Cells of the Central Nervous System of Man. By JOHN TURNER, M.B., Senior Assistant Medical Officer, Essex Asylum.

A LARGE amount of both experimental and clinical work has now accumulated around this subject. I need only briefly mention the main results of the former, as they have been so often referred to by others that they are now probably familiar to all workers in this field.

Nissl, in 1894 or thereabouts, showed that shortly after section or injury of the axons of the hypoglossal cells, these cells showed alterations in their appearance. These were—swelling, then dissolution of the central chromatoplasm, and displacement of the nucleus towards the periphery of the cell. After reunion of the axis-cylinders restitution occurred; if reunion was prevented the cells, or many of them, degenerated beyond repair. Further experiments showed that section of *any* motor axons resulted in a similar change in their cells of origin. Marinesco and others have amply confirmed these results. As regards sensory cells, an important difference was noted. Lugaro (1) claims to have been the first to demonstrate that section of the peripheral branch of the posterior

root-ganglia sets up this change in their cells, but that section of the central branch fails to produce any such change. He now explains this on the assumption that the sensory neurons, in common with other peripheral neurons, have great power of repairing peripheral mutilations, and therefore they react when their peripheral branch, but not when the central, is injured.

Van Gehuchten (1897) and Warrington (1898) affirm that by depriving cells of the influence of the afferent impulses with which they are normally affected the change can also be produced,—as, for example, when after the severance of the posterior roots certain of the cells in the anterior horn become affected.

I have not seen Warrington's account of his experiments published in the *Journal of Physiology* (vol. xxiii, pp. 112—129), but Barker (*The Nervous System*, p. 299) gives a fairly full notice of them, and reproduces some of the figures, and it is from this source that I take my information. The alteration was found especially to affect the dorso-lateral group of cells, one of which is figured. This particular group is apparently very prone to present such a condition; so common is it in the cords which I examine (from the insane) that very few fail to show it. As will be referred to later on, the same condition seems to be very general in the cells of the cuneate and gracile nuclei and Clarke's column.

Lugaro (1) has recently questioned the truth of this last view; he does not believe that the typical picture of *réaction à distance* can be produced in the way that van Gehuchten and Warrington suggest. He regards central chromatolysis with peripheral nucleus as a form of rejuvenescence of the cell in association with regenerative activity in the injured nerve-fibre. This is the view of van Biervliet and van Gehuchten, the former of whom points out the resemblance the reacting cell has to an embryonic nerve-cell. Lugaro states that types of cells corresponding to the phases of reaction and repair are found in certain stages of phylogenetic development.

So much for the experimental side of the question. Clinically these cells have been met with in the cortex in a large number of cases, which present both on the psychical and physical aspects very varied symptoms. The reader should consult the articles published in *Brain*, vol. xxiv,

pp. 47—114, by Adolf Meyer, for full particulars regarding these, where also he will find a bibliography of the subject ; and also the article published in the autumn number of *Brain*, 1902, by S. J. Cole. This latter writer deals with the relation of alcohol to this cell form. I have myself met with between forty and fifty, and the large number which presented psychically symptoms of depression led me to suggest that one of the causes which is capable of setting up the change might be a lack of sensory impressions passing to these cells from the periphery, in accordance with the hypothesis that I, some years ago (*Journal of Mental Science*, vol. xlv), advanced, that states of depression depend on defects in the afferent or sensory side of the nervous reflex arc.

I have recently re-examined my cases with reference to (1) the precise character of the cell change ; (2) its incidence in other parts of the central nervous system besides the cortex cerebri ; (3) the locality and nature of the degeneration, if any, in the axons in their passage along the cord ; and (4) the nature of the psychical disturbances associated with these changes ; and as this has led to some modification in my views I herewith give a short account of the conclusions I have arrived at.

At the outset I would remark that I have never maintained that the cell change is a cause of the melancholic condition—quite the reverse ; I hold that the melancholic condition is the cause (one of the causes) of the cell change, or, more precisely, that the physical changes underlying the melancholic condition are accountable also for the alteration in the nerve-cells.

In a communication to this JOURNAL (October, 1900) I drew attention to the occurrence of this cell change in imbeciles, and suggested that in these cases also this was the result of paucity of normal impressions impinging on the cells. Its occurrence here is difficult to explain, either by the direct toxic theory or the axonal reaction theory. In this class of cases the cells, so far as my experience goes, do not show an advanced condition of the change ; they are large, plump, and still retain well-developed chromophilic flakes, peripherally and in the dendrites, and the nucleus, although displaced, presents an entirely normal appearance. In earlier communications I referred to this form as an early stage of *réaction à distance*. This I now believe to be incorrect.

It seems to me highly improbable, for example, in Case 3,

an imbecile who died at the age of 35, referred to later on, that these cells were in a transition stage towards a more grave and irreparable lesion. I see no reason to suppose if this man had died at a much earlier date, or if he had lived many years more, that any other than this condition of cells would have been met with. Fifteen days in the case of injury to axons (as by hæmorrhage) is long enough for advanced changes to manifest themselves (shrinking, complete absence of chromatoplasm, and very pronounced nuclear changes), and therefore a lesion of the axons in these imbeciles is improbable; a direct toxic action on the cells themselves is also highly improbable. I believe that it can be most feasibly explained here as the result of a state of defective development. It may be, as Lugaro suggests, that these cells represent phylogenetically an immature form. I prefer to regard them as immature, owing to unfavourable conditions of cell environment. The greater development of the efferent nerve-cells usually found in man is in all probability associated with the wealth of sensory impressions they receive. In imbeciles there is unquestionably not only a lack of afferent impressions from the periphery, but also an even greater lack of impressions of an associative nature—impressions from one cell to another.

I have divided my cases into two classes, in one of which the cells are similar to those just described; and these I term the imbecile type. In the other class are placed those cases where the change is much more pronounced, so that the nucleus is more or less affected; and these I term the genuine axonal reaction type.

A. *Imbecile Type.*

The chief characteristics of the Betz cells in this class are—

1. Large size with rounded outline. In many the border of the cell has an indefinite or frayed-out appearance, such as is often seen in animals.
2. Well-formed Nissl bodies are present in the apex, dendrites, and at the periphery of the cell body, while the centre has a pale, finely granular appearance.
3. The nucleus is markedly displaced, and may even bulge out the cell border; but it is large, round, and clear, and presents a normal appearance.

Vortex cells are common (noted in six out of sixteen cases). Meynert's columns are always well defined.

The cortical arterioles are generally thickened, or show an increase of nuclei in their walls, or have a hyaline appearance (noted in fourteen out of sixteen cases).

I will now give a short account of the cases in which I have found this type of cell.

NO. 1.—A. S—, female, was never very bright ; got worse at age of 19. When admitted was fairly nourished ; palate high, narrow, and asymmetrical ; pasty complexion ; imbecile aspect ; smiled and displayed her gums when spoken to ; was very taciturn ; speech fairly clear. Very little information could be elicited from her. She could tell the number of her brothers and sisters. Obstinate and perverse. Remained dull and inanimate, sitting all day unoccupied. Habits dirty ; rarely speaking. Died, after five years' residence, of tubercular enteritis, æt. 27.

Autopsy.—Body fairly nourished. Beyond the ulcers of cæcum, colon, and ileum, and an adherent (organised) clot in the superior longitudinal sinus, nothing was detected to call for notice in the viscera.

Microscopical examination showed small tubercles and caseous deposits in the lungs, and the liver showed advanced fatty degeneration ; the kidneys were natural.

NO. 2.—R. T—, female, an imbecile incapable of looking after herself. Mother a drunkard ; father died of phthisis. Is eldest of seven ; the others show no mental defects. On admission was thin, with a rather narrow and highly arched palate. Very childish and amiable ; sits and plays with a doll, and chuckles when spoken to. Speech very indistinct. She does as she is told. Beyond having to be dressed and kept clean, she gave no trouble. Died after seven years' residence, æt. 24, of general tuberculosis. At the autopsy the body was emaciated. Tubercular ulcers were found in the intestines and a small cavity in one lung. The brain was firm, but otherwise appeared natural. The kidneys and liver appeared natural, but were not microscopically examined.

NO. 3.—T. E—, male, imbecile suffering from epilepsy ; sufficiently intelligent to work in a jute factory before his

admission here. He was 16 years old when admitted, had frequent and severe fits, and prior to and after them was often maniacal and violent. He was very impulsive, and on several occasions had bitten other patients very badly. He was active and in good health until several months prior to death, during which time he was confined to bed suffering from phthisis, of which he died at the age of 35. At the autopsy the body was fairly nourished. The upper lobe of the right lung was solidified, and contained many caseous areas. The brain was firm, but otherwise natural, as also were the other viscera.

NO. 4.—S. M—, female, congenitally defective mentally; mother of eight children, one of whom was imbecile. She became worse (mentally) after the birth of her first child, and since then had been obstinate, sulky, and troublesome. Kept her bed for some time prior to admission. On admission was thin and badly nourished, had a surly, forbidding aspect, and lay huddled up in bed. She would not reply to questions, and was very resistive. Refused food, and struggled without making any noise when she was fed through the nasal tube. Was dirty in her habits; often very noisy at night. Later on she began to talk a great deal in a childish, querulous way; now ate ravenously. Her legs became contracted, and she developed a bed sore, and died of pneumonia, *æt.* 45, three months after admission. At the autopsy nothing was found in the viscera to call for remark beyond the pneumonic condition of the lungs, degenerated coronary arteries, and some shrinking at the vertex of the brain. The kidneys and liver were examined microscopically: the former showed some thickening of the capsule and the arteries, and a small cyst was found; the latter was in a well-marked state of fatty degeneration. The posterior spinal ganglia were examined, and the cord for tract degeneration. The cells of the ganglia did not present the appearance of axonal reaction. In the cord there was very slight (practically negligible) Marchi reaction in the posterior columns, and crossed pyramidal tracts in both the cervical and lumbar regions. The posterior nerve-roots at their entrance to the cord were markedly degenerated in the lumbar region, not at all in the dorsal or cervical regions. The anterior nerve-roots in the lumbar region also showed considerable Marchi reaction.

NO. 5.—M. F—, an imbecile woman, but with sufficient intelligence to be an useful house worker. When admitted in 1888 was maniacal and troublesome, but quieted down after ten months, and remained for ten years a fairly intelligent and very industrious woman, but weak-minded, flighty, and talkative. At the end of this period she developed acute melancholic symptoms, refused food, and emaciated. For the last year of her life she was a deplorable, miserable-looking creature, sat all day in a chair, unoccupied, and died at the age of 49 of pneumonia. At the autopsy there was found consolidation of both lungs posteriorly. The heart, as is usual in imbeciles, was very small (139 grammes). The intestines showed commencing colitis. The brain showed some shrinking at the vertex, and the lateral ventricles were dilated. The liver and kidneys were examined microscopically; the former showed some increase of interlobular tissue and thickening of the capsule; there was some increase of interstitial tissue in the kidneys. Besides the brain cortex the cells of the cuneate and gracile nuclei and Clarke's column were affected, but not the anterior horn-cells of the cord or those of the posterior root-ganglia. The cord showed insignificant recent degeneration of the crossed pyramidal tracts in the cervical and dorsal regions, and none in the lumbar.

NO. 6.—F. B—, female, chronic melancholia with probably congenital defect. Always more depressed at night. She had a high, narrow, and asymmetrical palate. After four years' residence as a quiet, industrious woman, she developed (result of a fall) cellulitis of one leg with extensive suppuration. She rapidly became demented and depraved in habits, and died. At the autopsy the brain, thoracic and abdominal viscera appeared fairly healthy. On microscopical examination of the kidneys a slight increase of interstitial tissue was noted, and the liver showed slight fatty changes. Osmic acid preparations of the cortex (ascending frontal) showed a natural condition of the tangential fibres and of the fibres of the medullary portion.

NO. 7.—A. E. B—, female, æt. 36, suffered from agitated melancholia. She had a high, narrow, and V-shaped palate. At the autopsy no evident changes were noted in the viscera. Microscopical examination of the kidneys and liver showed

that the former were healthy, and that there was very slight fatty degeneration of the cells of the liver.

NO. 8.—E. S—, female, æt. 52, suffered from agitated melancholia passing into dementia ; palate rather high and narrow. At the autopsy no very evident cause for her death was found.

Besides the Betz cells those of the cuneate and gracile nuclei and Clarke's column were affected, whilst those of the anterior horns of the cord and the posterior root-ganglia were not. Practically there was no evidence of tract degeneration in the cord beyond one or two scattered fibres in the crossed pyramidal tracts of cervical, dorsal, and lumbar regions.

NO. 9.—E. E—, female, suffering from agitated melancholia, died of pneumonia and pleurisy at the age of 40. There was a history of alcoholic intemperance in this case. Her kidneys were tough and contained cysts ; microscopically they showed increase of interstitial tissue, especially marked just beneath the capsule, and some fatty degeneration of the renal cells. The liver showed fatty infiltration. Besides the Betz cells some of the fore-horn cells of the cord, especially in the lumbar region, and also some of the posterior root-ganglia cells, were affected.

NOS. 7, 8, and 9 were more fully described in the *British Medical Journal*, October 26th, 1901, "The Physical Basis of Melancholia."

NO. 10.—H. H—, female, suffering from an acute attack of agitated melancholia subsequent to influenza. Was only a few days in residence when she died, æt. 60. Her kidneys were small and granular.

NO. 11.—J. C—, female, senile melancholia ; died after a month's residence, æt. 67. Had large granular kidneys.

NO. 12.—E. H—, female, chronic melancholia of several years' duration ; died æt. 73. Had small granular kidneys.

NO. 13.—J. P—, male, admitted in an acutely melancholic condition ; constantly groaning and ejaculating that he is the

most miserable man in the world. Died after five months' residence, æt. 68. His kidneys were in a state of chronic interstitial nephritis, with numerous small cysts. Liver natural.

NO. 14.—M. A. F—, a female, senile melancholia ; died of chronic Bright's disease, with small granular kidneys, æt. 73.

The last two cases I shall refer to did not present symptoms of depression : both were demented, the man apparently a recent case, but no history could be obtained ; the woman probably congenitally defective, with very bad family history.

NO. 15.—F. R—, male ; was admitted in a dazed condition ; faulty in habits, sitting in one posture all day. He died after a month's residence, æt. 38, of bronchitis.

NO. 16.—H. R—, female, admitted in a maniacal condition, ultimately passing into a state of secondary dementia. Her father and father's sister had been insane, and one of patient's sisters was imbecile. Her palate was rather high and narrow. She died æt. 35, and at the autopsy her stomach was completely filled with pieces of blanket, sheeting, and hair. Her kidneys were healthy to the naked eye. Besides the Betz cells, many of the posterior ganglia-cells were affected, but not those of the anterior horns of the cord nor the Purkinjè cells of the cerebellum. Her cord showed well-marked old degeneration in the posterior columns in cervical, dorsal, and lumbar regions, but the crossed pyramidal tracts were apparently unaffected.

In the above list of cases five were undoubtedly imbecile, and eleven (including one of the former) were melancholic. Nos. 10 to 14 inclusive occur in old people.

It is interesting to note that the ill-formed palate, Clouston's deformed type, one of the physical stigmata of congenital defect, is very commonly met with in those not classified as imbecile (*vide* Nos. 6, 7, 8, and 16). We shall, however, point out that this type of palate is not unfrequently associated with the second class of cases.

I have noted the condition of the kidneys and liver, because disease of these organs, especially the former, is very commonly

met with. Although it would seem to be a factor predisposing to the condition of nerve-cells, yet it is not an essential one, for in Nos. 1, 2, 3, 7, 15, and 16 these organs were natural (1 and 7 examined microscopically).

B. *Genuine Axonal Reaction Type.*

The second type of cell is met with under very varied conditions both physically and mentally. As I believe that lesion of the axon is a factor in all these cases, I have termed them the genuine axonal reaction type in contradistinction to the first class, in which, probably, the axon is not at fault, and which are therefore not instances of axonal reaction at all, although the form of cell simulates it. Whether this condition of the axon is a secondary result following a lesion of the cell is a moot point. The weight of evidence, in my opinion, is in favour of the view that the cell is implicated secondarily to the axon.

These (Betz) cells present the following features :

They are in the majority of instances small, angular, stain very lightly, and show practically no Nissl flakes. Very often a large mass of pale yellow pigment lies all along one side of the cell—the side most remote from the nucleus. The nucleus, beyond being much displaced, is generally shrunken and denser than usual ; in some cases, however, it may be large and ruptured.

I have notes of eighteen cases which correspond to this type. It will not be necessary for my present purpose to give details of them, as the form of cell change seems to have no definite connection with the mental aspects of the cases.

Eight of these had an undoubted alcoholic personal history. In five the palate was badly formed. The kidneys were granular in five, and in one large and pale.

The cord was examined for tract-degeneration in two—one with an alcoholic history, the other without. In both cases very marked signs of recent degeneration were found in the crossed pyramidal tracts.

In one case the condition was undoubtedly due to lesion of the axons ; in this, after a hæmorrhage of fifteen days' duration, which had destroyed one internal capsule, the cells on the side of the hæmorrhage alone were affected. This case is

interesting as showing the length of time which is sufficient to set up very advanced changes when the axons are affected. The cells on the side of the lesion were pale, shrunken, without chromatoplasm, and the nuclei were profoundly affected.

As regards the incidence of the change in other nerve-cells, I may say that in this class, as in the first, the hypoglossal cells are rarely affected, whilst those of Clarke's columns and the cuneate and gracile nuclei almost always are.

I am very doubtful whether this condition of these cells has any pathological significance, at all events when the nucleus is merely displaced and the peripheral and dendritic Nissl flakes are well formed, for I have rarely examined any cases in which these regions, especially the two latter, do not show it more or less marked; and I am inclined to think that a peripheral nucleus and finely granular central chromatoplasm is a condition normal to these localities. Dr. J. J. Douglas (*Brit. Med. Journ.*, September 14th, 1901) has drawn attention to the common occurrence of this condition in the cells of Clarke's columns.

It is not usual to meet with the alteration in the Purkinjé cells of the cerebellum in either class.

The conclusions I would draw are that we must not class together as similar all cases of central chromatolysis with displacement of nucleus.

It may be due to two (perhaps more) different causes; and whilst in one of these classes the affected cells seem to bear a definite relation to the mental symptoms of the cases in which they occur, in the other they do not seem to have any such relation.

The first type of cell is found in imbeciles and some melancholiacs, especially senile melancholiacs. There is no evidence in these that the axons are at fault, and they are met with under conditions which are opposed to the view that they are in an early transition state, tending towards a more marked degree of cell change. In the case of the imbeciles there are reasons for regarding them as a peculiar form of cell associated with this defective mental state; they represent immature cells which have not fully developed owing to unfavourable environmental conditions, *viz.*, a lack of sensory innervation. In the case of the melancholiacs it seems probable that they are also the result of defective innervation, especially liable to manifest

itself at an advanced period of life, when the metabolism is at a low ebb. They would therefore represent a degradation or dissolution of the cell whereby it reverts to an immature form.

The melancholic condition does not depend upon the presence of these cells, but the cell condition is due to the cause which on the psychical side manifests itself in depression.

Although both in imbeciles and melancholiacs, therefore, it is supposed that the immediate factor which acts on and affects the cells is similar, there is no necessity to postulate any psychical parallel between the two conditions. Whether the above-mentioned factor operates on a fully developed nervous system, or on one which is not fully developed, will determine the respective psychical results following this change in the cells.

In the other class the cell change is due either to direct lesion of the cell bodies or to a lesion of their axons. I am inclined to think that, at any rate in the cases with an alcoholic history, the second alternative is the correct one. And as we are able to definitely assert that lesions to the axons will set up the change in their cells of origin, I prefer to accept this explanation in those cases where we find such a condition rather than invoke another—a problematical cause about which we have no certain knowledge.

REFERENCE.

(1) Lugaro, 'Riv. Speriment. di Freniatria,' 1902, f. i, p. 981 (account taken from abstract by W. Ford Robertson, *Review of Neurology and Psychiatry*, vol. 1, No. 1).

On the Action of the Rolandic Cortex in Relation to Jacksonian Epilepsy and Volition. By A. B. KINGSFORD, L.R.C.P.Lond., M.R.C.S.Eng.

THE feature of Jacksonian epilepsy to which I wish to call attention is the periodicity of the discharge. Whether we regard the lesion as "irritative" or "discharging," it is, at all events, *chronic*; and whether we regard the discharges as going

direct from the cortex to the efferent nerve-cells, or as causing convulsions in a more roundabout way through subcortical systems, they are, at all events, *periodic*. How, then, do chronic lesions cause periodic discharges? The answer which I wish to put forward is suggested by certain passages in Mercier's *Psychology, Normal and Morbid*, p. 283, which run as follows:—Speaking of how organic bodies may contain a store of motion which can be liberated by the impress of motion from without, and after likening this property to that of animals and their power of movement, the author continues, "But animal organisms have a further property which most inorganic bodies have not. They are continually adding to their stores of motion, and by these continual additions their store at length becomes surcharged. The tension of the contained motion reaches such a pitch that the *containing resistance* is no longer sufficient to keep it in bond, and it breaks out, possibly without the provocation of added motion, certainly with minimal provocation." Later on, when discussing "Will and Desire,"⁽¹⁾ the same author writes of nervous mechanisms, "There are many machines used in the arts, which depend for their actuation on the gradual filling of a vessel with water. The vessel is of such a shape and so supported that, as it fills, the centre of gravity shifts, until, at a certain degree of fulness, the vertical at the centre of gravity falls without the base; the vessel then capsizes, empties its contents, regains its previous distribution of weights, rights itself, and begins to fill once more."

Let us extend the analogy a little.

Suppose the overturning of the vessel to be partly regulated by an elastic string so as to allow of its filling a little more full than it otherwise would without capsizing, then we can imagine the arrangement and power of the string to be such as to allow of the vessel discharging a little when the limit of stability was passed, and to effect the righting of the bucket again before much of its contents are emptied out. Suppose, moreover, the upper end of the string to be fixed to the arm of a lever capable of moving towards and away from the bucket under the impress of external circumstances, *e. g.*, the wind.

Some such an arrangement as this may be taken to represent the Rolandic mechanism and its controlling action over (all) subcortical centres in health.

Now let us suppose the elastic string to become weakened

as by "perishing," then it might happen that the bucket could never fill as full as it did at first without discharging some of its contents, and that an excessive discharge would follow any sudden inclination of the lever towards the bucket.

The action of a faulty control mechanism such as this would be fairly analogous to that of the diseased Rolandic cortex.

This point of view involves a twofold assumption :

1. That the discharges, causing convulsions, start from sub-cortical centres, and represent in fact a spontaneous overflow of their continually accumulating energy.

2. That the function of the Rolandic cortex is to control such discharges, and to determine their direction when allowing them to issue.

As these assumptions are not warranted by any great authority it will be necessary to examine the grounds for them, commencing very briefly with the current theories of action of the Rolandic area and the main evidences upon which they are based. At the outset of our inquiry we are confronted by considerable difference of opinion. Thus Schäfer⁽²⁾ says (of the Rolandic areas), "In spite of the fact that movements have resulted from their stimulation, we are *not* justified in terming these portions of the cortex *motor*, but may regard them as sensory, and may look upon the movements as being set up by a motor-discharging centre elsewhere as the result of nervous impulses reaching it from the sensory region of the cortex." While Ferrier⁽³⁾ writes, "Sensory and motor centres are not coincident, or at any rate not co-extensive, in the motor area. Sensation may be abolished by lesions altogether outside the Rolandic area. Paralysis of cortical origin may be, and frequently is, independent of impairment of cutaneous or muscular sensibility in the paralysed limbs." And Bastian,⁽⁴⁾ after denying the existence of motor centres in the cerebral convolutions, says, "To argue that groups of cells have motor functions merely because stimuli issuing from them evoke movements when they impinge upon motor ganglia is quite on a par with the argument that an organ has sensory functions because fibres come to it from sensory cells." Dr. Bastian then continues, "The centres in question are rather sensory in nature, and are probably intimately concerned with certain groups of kinæsthetic impressions, whatever other functions

they may subserve or with whatever other centres they may be in intimate relation."

These extracts illustrate sufficiently for our purpose the well-known controversy about the functions of the Rolandic cortex, which might almost be called the battle-field of the nervous system. The case for the existence of motor centres, or even of sensori-motor centres, rests on the evidence afforded *post mortem* by Jacksonian epilepsy and on the results of experimental stimulation of the so-called centres in the higher animals and in man.

On this point Sir William Gowers⁽⁵⁾ says, "Of all the regional diseases of the brain in man, lesions of the convolutions stand almost alone as a cause of convulsion, and experiments demonstrate that irritation of the cortex in the motor region has the same effect." "The results of experiments seem, indeed, conclusive." Accepting Gowers' facts, I suggest that the results of experiments are susceptible of another interpretation. Concerning these results Sir Michael Foster⁽⁶⁾ says, "In considering this point" (*i. e.*, the question of localisation) "it must be remembered how rude and barbarous a method of stimulation is that of applying electrodes to the surface of the grey matter compared with the natural stimulation which takes place during cerebral action. The one probably is about as much like the other as is striking the keys of a piano at a distance with a broomstick to the execution of a skilled musician." Now if thumping a piano is at all likely to damage it, much more must similarly "barbarous" treatment be likely to damage the working of a far more delicate mechanism such as the Rolandic cortex. And so Foster's simile warrants, I think, the hypothesis that the results of experiments on the Rolandic cortex are attributable to the injurious effect of the stimulation. Moreover Hitzig⁽⁷⁾ is reported as saying that he "found that simple exposure of the pia is followed by marked injury to the convolutions lying below, and that there is often implication of those contiguous to them. The uncovering of the membrane of the motor zone led not only to motor impairment in the extremities, but also—save in one case—to impairment of vision, and in all the cases to impairment of the reflex movements of the eyelids." It is generally agreed among physiologists that whatever other functions the Rolandic cortex may have, it has certainly some

inhibitory power. In 1892 Dr. James Shaw⁽²⁸⁾ wrote, "Inhibition is primarily a function of the motor area," and since that date Sherrington (and others) have brought forward evidence sufficient to prove it.⁽²⁷⁾ Whatever the exact nature of inhibition may be, it must mean exertion of force through some distance, involving a continuous expenditure of energy while it lasts. Any damage done to the Rolandic mechanism is likely to impair its working. As with disease, so with injury—in either case there may be, as Mercier says, increase of process; but there must always be defect of function, and this, I believe, is the true explanation of the apparently active response to electrical stimulation on the part of the Rolandic cortex—namely, diminution of its inhibitory action leading to over-action or discharge of the lower automatic centres. That even a minimal stimulation is on the way towards causing damage serious enough to interfere with function is extremely probable when we consider that prolonged stimulation causes visible hyperæmia with convulsions, and that a condition of disturbance quite invisible is likely to interfere with the function of so delicate a mechanism as the Rolandic cortex. But to regard the case as one of defective action of the Rolandic cortex only is, I think, to take an incomplete view of the relation of the upper and lower centres. If the latter are constantly being charged with motion, as suggested by Dr. Mercier, derived chiefly from the food assimilated, how is this motion distributed? What becomes of it more especially when the organism is at rest? Now the upper centres are often spoken of as storehouses of motion or nervous energy, and from whence (apart from the food) is their energy stored up? I would suggest that when the supply of energy in the lower centres exceeds the demand, during the intervals of quiescence, such excess may pass off to the upper centres and there be stored up for future use, undergoing perhaps some change of form in the process—just as the energy of an electric current may be stored in the form of energy of chemical separation in a secondary battery. But the body itself presents a still more suggestive analogy. Sugar is intermittently thrown into the portal blood-stream in larger quantity than is required at the time, and is accordingly stored up in the liver, undergoing a change of form into glycogen in the process, and is restored to the blood in a

continuous, though variable stream, as required by the organism. Now, if matter may undergo this kind of storage, why may not motion, since both are forms of potential energy, and the storage of either is an economy? For I take it that the inhibitory action of the upper centres on the lower is a steady output of motion or energy tending to preserve and build up those lower centres when partially exhausted, in return, so to say, for the surplus motion intermittently received from them when replete. So much for a possible mode of inhibition, considered as a nervous economy. There is yet another point of view from which inhibition appears an economy in the scheme of the nervous system. It has been shown, as already stated,⁽⁸⁾ by Sherrington and others that there are certain definite inhibitory centres in the cortex, and, moreover, that some of these are in close proximity, not to the supposed excito-motor centres for the same group of muscles, but to those of their respective antagonistic group of muscles. From the point of view that all the centres are fundamentally inhibitory, it would seem that agonist and antagonist centres are so coupled together that on receipt of a volitional stimulus the inhibitory action of the agonist is lowered, with a corresponding increase in the inhibitory action of the antagonist. The experiments of Dr. Charles Beevor⁽⁹⁾ favour this view, for he has shown that while directly antagonist muscles are relaxed, the synergic muscles may be, and generally are, called into play. Now it is obvious that in any such exercise as walking it is an economy of force to lower the resistance against which the agonist group has to work, and still more of an economy if the very process of lowering the resistance of antagonists is, from another point of view, a storing up of energy in them ready for their turn to become agonists. Such, I believe, is what actually occurs, for when antagonists are relaxed there must be a diminished output of that form of energy from lower, perhaps spinal centres, which maintains muscular tone, and such diminution implies a damming back of the ordinary continuous outflow, *i. e.*, a storing up of motion. The calling into play of synergic muscles along with the directly agonist muscles is thoroughly in harmony with the action of lower centres educated (so to say) by volitional methods, as will be shown later. Furthermore, if it be true, as I suggest, that even minimal stimulation of the Rolandic areas disturbs them

enough to check or even stop their action for a time, it becomes easy to understand why mechanical stimuli should have so little effect. Such gross forms of stimulation can hardly disturb, without destroying, so delicate a mechanism. To borrow again Foster's simile, it is like thrusting a broomstick among the wires of a piano in search of harmony. Thus the inhibition hypothesis of Rolandic action has advantages over current doctrines as regards both economy and simplicity. It is now necessary to see how far any such theory can account for the phenomena of volitional, and of involuntary or automatic, actions, and for the paralysis due to removal of the Rolandic areas. We may take the latter first, as the study of paralysis will necessarily help us to distinguish the volitional components of actions, the execution of which is largely involuntary in detail. That the paralysis caused by removal, destruction, or physiological isolation of the Rolandic areas in the lower animals is a purely volitional one is evident from the behaviour of such animals after operation. Broadly speaking, such animals are capable of gratifying their natural desires; the lower the animal in the vertebrate scale the less the removal of even the whole of its cerebrum seems to interfere with its daily routine. All the actual movements of such higher animals as the rabbit seem perfectly adapted for the gratification of its ordinary desires; what it has lost with its cerebral hemispheres is mainly memory of special movements acquired by education, and of the complex perceptions which help to control both them and conduct generally. Thus a rabbit runs heedlessly past a heap of carrots, only avoiding it as an obstacle, while a dog is for ever on the move, and wastes rapidly in spite of feeding ravenously. As far as the actual movements are concerned, Foster says that a dog whose Rolandic cortex has been removed "can, after recovery from the operation, carry out voluntary movements so well that it is difficult to detect any deficiency in this respect."⁽²⁹⁾ Again, if in the dog, says Foster, "the pyramids in the bulb be divided without injury to the cortex, but with consequent degeneration of both pyramidal tracts below the section, such a dog is able, apparently, to execute all the ordinary voluntary movements of which a dog is capable, though no regeneration of the pyramidal tracts takes place."⁽²⁹⁾ And Schäfer, speaking of removal of one cerebral hemisphere in dogs by Goltz, says, "Such animals . . . show in their ordinary move-

ments an extraordinarily slight amount of motor paralysis, though apparently rendered incapable of performing such a purely volitional acquired action as the giving of a paw."⁽⁵⁰⁾ In monkeys which are subjected to similar experiments like results have been obtained, but generally with more extensive and more permanent loss. Moreover in them a wholly new phenomenon makes its appearance, *viz.*, the *contracture* which follows removal of their Rolandic centres, and which follows also lesions of the corresponding parts of the brain of man. "This state of hypertonicity," Schäfer suggests, "may be due to the cutting off from the lower centres of the inhibitory impulses which they habitually receive from the cortex cerebri, while excitatory impulses which reach them from the cerebellum are still passing."⁽¹⁰⁾

These facts suggest that the mainspring of all movements is essentially automatic, but with a constantly developing volitional control as we rise from the fish to man ;

That the controlling or volitional elements become the predominant feature of the most highly organised animals and man, and is proportional to the complexity of their environment ;

And that in *form* the volitional element is entirely inhibitory, what is called an act of will being simply a special relaxation, diminution, suspension (or failure) of inhibition.

The facts both of physiology and pathology point to the Rolandic cortex and pyramidal tracts as the organs through which such control or volition is exercised.

Both Foster and Schäfer agree in stating that there are undoubtedly two paths of volitional impulses, and so far as I can find this is not disputed. Foster, in 1897, left the question of the function of pyramidal tracts quite open.⁽¹¹⁾ After discussing the effect of section of the pyramids, he says, "We can hardly doubt that while the pyramidal tract was intact the animal made use of it, and we may further infer that the movements of a dog without the pyramidal tracts are different from those of a dog in which these are intact, though we cannot state exactly what the differences are." And Schäfer⁽¹²⁾ quotes Donaldson as saying, "The activity of the lower level cells is in all animals brought about by two sets of impulses, the one set derived from the sensory nerves passing from their termination in the grey matter of the lower level centres either

directly to the motor cells, or more probably through intermediary cells, which play an important part in effecting the co-ordination required for purposeful movements. The other set of impulses, also in the first instance derived from the sensory nerves, pass to the cortex, and are thence sent down (perhaps along the fibres of the pyramidal tracts) to the motor nerve-cells, or rather probably also to the intermediary co-ordinating mechanism. In the lower animals this second set plays an insignificant part in producing the ordinary co-ordinated movements of the animal ; in the higher animals an important part, so that, in them, the cutting of it off from the lower centre cells removes a great part of the impulses by which they are normally stimulated."

Now it is only the conclusion Donaldson arrives at which I venture to differ from. We have evidence of some inhibitory function exercised by the Rolandic cortex, and also that when lesions cause degeneration of the pyramidal tracts contractures set in (in most monkeys and in man) from over-action of lower centres due to loss of control. We are therefore entitled to assume that the pyramidal tract is the path of inhibitory influences. We have seen, furthermore, that animals deprived of their hemispheres exhibit not only loss of memory and perception, on which volitional control is largely based, but also of acquired movements ; and the destruction of either the Rolandic cortex or the pyramids deprives the animal of all the actions which he has learnt by education, *e. g.*, giving the paw. This brings us at once to the question of the part played by volition in the execution of movement. It is obvious that volition plays no part in the actual execution of movements which are effected unconsciously, but can only appear when the execution of movements is based on some conscious memory of similar movements in the past. Such revival serves the purpose of further adaptation of movement in one of two ways, *i. e.*, intensively or extensively. The adaptation is intensive when the correspondence, with an unvarying environment, is made more perfect or complete, as in learning to cycle or firing at a target. And it becomes an extensive adaptation when more variable circumstances are taken into account, as when the cyclist learns polo or the rifleman goes sniping. This is the educational function of volition in the regulation of movement. The other function is that of suspension of action, which may

come into play either when the mind is made up, pending the arrival of the right moment for action, as when the prize-fighter, with every muscle tense, watches his opportunity to deliver a "settler;" or to gain time for irritation to cool, as when a man pockets a vindictive letter at the pillar-box for re-perusal in the morning. Here the inhibitory character of the volition is most apparent, and usually adds enormously to the effectiveness of the action when it comes at last. The arrangement of the pyramidal tracts, distributed as they are to the whole series of motor centres (or their intermediary connections) in the spinal cord, strongly suggests that these tracts constitute the pathways through which this volitional control is exercised. This mechanism might indeed be compared, functionally, with those of some Invertebrata, described by Dr. Haycraft, which are so well adapted for securing sudden and effective leaping movements of the whole organism. Apart from the formation of a decision—the process, that is, of willing, with which we are not immediately concerned,—this is the only part which volition takes directly in the execution of well-adapted movements, namely, that of releasing the trigger or letting go. Indirectly volition plays a further part in the reinforcement of actions, as in volition with effort; but this is not directly associated with the execution of movements, and only clumsily so at best. It has, moreover, an explanation of its own. This view, which assigns to volition only a transitory rôle in the execution of particular movements, allows it much greater scope in the regulation of series of movements or actions, and a predominance over combinations of series of actions or conduct. In general, all that we are vividly conscious of is the aim in view; thus we wish to be on the opposite side of the street, and forthwith we make series after series of movements with that aim in view, and presently find ourselves at our goal—sometimes, indeed, far beyond it for want of attending to our automatic actions. Not merely are we hardly conscious of our movements, but similar series may be successfully carried out in the complete unconsciousness following an epileptic fit. Moreover any interference with the automatic processes is prone to spoil the performance. Apart from the possibility of all our ordinary movements being carried out involuntarily in certain abnormal states of consciousness, *e. g.*, after epileptic fits, in somnambulism, and when hypnotised or under the influence of alcohol or drugs,

we have the further facts that though muscles may be paralysed as far as the execution of the will is concerned, they may still be quite capable of giving expression to emotions, notably in the case of those supplied by the facial nerve when it is affected by supra-nuclear palsy. And Beevor⁽¹³⁾ says that in hemiplegia you may have the latissimus dorsi paralysed as an arm muscle, but functional as a bilateral muscle of expiration, and contracting when the patient gives a voluntary cough. From which it is clear that the machinery is sufficient without volition for the execution of all completely adapted movements.

The mode of expression of emotions Mr. Darwin⁽¹⁴⁾ says is innate or hereditarily organised, and, though more modifiable by circumstances acting through the will than reflex actions, is less plastic than the instincts of recent acquisition. Such instincts are the mechanisms whose state of repletion has the conscious accompaniment called Desire, and whose overflow is controlled to a greater or less degree by the higher centres of volition according to the organisation of the instinct. Those instincts which have unduly escaped from such control and gained an independence which is unserviceable to the organism are those described by Dr. Mercier as parasitic mechanisms; and these actuate conduct or the more complex series of actions in ways inimical to the interests of the organism, just as the lower centres actuate the simpler series of movements in ways inimical to the safety of the organism in Jacksonian epilepsy. The defect in both cases I believe to be essentially defect of control of the lower by the next higher centres, the difference being merely one of the relative rank of the lower centres in the two cases, for the lower or instinctive centres of conduct would perhaps be higher than the controlling centres of mere movements. We have, then, the three modes of origin for movements—the instinctive, the emotional, and the reflex,—not sharply marked off from one another, but differing in their progressive independence of volition. The question next arises how far in volition we have another mode of originating movement. Such initiation I believe to be an indirect one only. Along with the revival in memory of ideas of actions there comes the idea of the association of pleasure or pain with the action contemplated, and in correspondence with which comes a secondary desire to realise the pleasure or avoid the pain, as the case may be. And this secondary desire may

powerfully reinforce, or inhibit, the primary one, and determine the balance between desire and control. The more vivid and extensive the memory of the associated relations of pleasure and pain, the greater will become the influence of the control over the desire, and the more elaborate the mechanism underlying concurrently progressive desire and control. That such progressive development has taken place in man seems suggested by his brain structure, with its enormous controlling agency—the last to be developed in the individual,—and by the progressive development of similar though inferior agencies in the lower animals, especially mammals, culminating amongst them in man's nearest relative, the ourang. Now the remarkable fact of there being two volitional tracts, as described by the best authorities—an indirect or subcortical, and a direct or pyramidal one,—seems quite in accordance with the view that the subcortical one serves for the direct initiation of movement through desires, and the pyramidal for inhibitory control of movements, a control which has obviously increased in man, as his Rolandic centres and pyramidal tracts have, as compared with those of other mammals. Foster speaks of the indirect route as apparently falling into disuse, which suggests that the direction of movements, becoming more and more referred to the controlling centres as man's correspondence with the outside world increased, has now become very largely a matter of relaxation of inhibition. Be this as it may, it seems that it is only because the enormous majority of men's actions are in the educational stage referred to, and worked through the Rolandic centres, that the paralysis caused by their destruction in him is so much more complete than in the lower animals, especially when we reflect that the limb muscles are for many purposes always being educated, and that those whose education is most complete are just those which escape most and recover most readily after lesions causing pyramidal degeneration.

It might be supposed that destruction of part of the Rolandic system and corresponding loss of volitional control should leave the lower centres all the more free to act with the production possibly of movements or convulsions ; but you cannot alter one part of an organisation and leave all the rest just as before.

First there is the effect of shock, which is proportionate to the size and importance of the part removed, and the brunt of which falls on the most elaborately organised of the mechanisms

associated with the mutilated part, while the simpler and more completely organised mechanisms recover more quickly, and also more completely. Thus the operation may permanently alter the relation between subcortical and spinal centres for the worse.

Secondly, the removal of a constant controlling force should result not in spasmodic actions, but in a chronic overflow of energy from the lowest and least affected mechanisms. And this is just what we see in the early and late rigidities, due largely to over-activity of spinal centres, and affecting both agonist and antagonists simultaneously.

Furthermore, on our hypothesis the accumulation of energy in the subcortical centres would especially be interfered with, *i. e.*, any excess from time to time might very well leak away and be lost as one of the consequences of the operation. Suppose, however, we could by other than surgical means suspend or diminish the controlling influence of the cortex with minimum disturbance of the subcortical centres; then we might well expect to get some display of automatic action. And so we do, as is seen in the automatisms (often very elaborate) which follow attacks of petit mal, in somnambulism, and in hypnotism. The basal elements conspicuously lacking in all these states are those of conscious memory and perception, with their joint controlling influence.

Whether the actions are due to spontaneous overflow, as in petit mal, or to suggestion, from within, as in somnambulism, or from without, as in hypnotism, the striking feature of them all is the faulty or defective adjustment to the totality of the environment. The difference between them and the convulsions of Jacksonian epilepsy seems merely the difference between the plane of combined series of movements called actions and the plane of mere movements; as we know that the Rolandic cortex is the seat of the trouble in the latter, we may fairly assume that in the former the defect is one of association systems next above.

Another mode of diminishing cortical control is by administration of anæsthetics, and the automatisms to which these give rise are distressingly obvious both to the anæsthetist and the surgeon, and sometimes to the friends of the patient.

Before passing on to see how this hypothesis harmonises with the leading features of epilepsy, it is well just to say that however doubtful may be the possibility of "stimulating" the

Rolandic cortex to action, there is no doubt that other and lower parts of the nervous system may be so stimulated. That there is some essential difference between the two is evident from the difference of the curves obtained. The difference is probably one of completeness of organisation with a correspondingly stereotyped character of response. It is quite conceivable that the responses of subcortical parts of the brain to stimulation may be nearly as stereotyped as that of a piece of nerve, seeing how stereotyped by practice become our actions and habits.

The characteristic feature of an epileptic discharge is the progressive and correlated increase of the violence of the spasms and the intervals between them. Commencing with contractions so small and so frequent as to appear fused in the so-called tonic spasm, the intermissions soon become more evident, and the separate spasms more forcible, till the last of all, which generally comes with surprising violence just when the fit appears to be over. This feature, as Dr. Mercier⁽¹⁵⁾ pointed out long ago, is suggestive of a discharge taking place against an increasing resistance, resembling, as it does so closely, the discharge of electric sparks from a static machine while the distance between the conductors is being slowly increased.

In our case the tendency to discharge on the part of the automatic centres must lessen with every actual discharge which takes place. So an uniform resistance would suffice to prolong the intervals between the discharges. But the general fact that the discharges, as measured by the force of the muscular contractions to which they give rise, increase progressively in amount, proves that usually the resistance is an actually increasing one. If so, whence comes this gradually increasing resistance? It is difficult to believe that it also is a function of the same centres which are discharging at the moment from "want of stability." Thus Gowers⁽¹⁶⁾ says, "The process of inhibition which plays so prominent a part in many minor attacks, and in the initial stage of many severe seizures, seems at present to baffle our efforts to explain it.

"It was formerly regarded as the result of an increase in that *resistance* in the nerve-centres which normally controls and limits nerve activity. The resistance was supposed to be a function of nerve-cells related to, but distinct from, that which

causes their discharge. But when scrutinised this is merely a translation of the phenomena observed into terms of nerve physiology. The fact of 'inhibition,' of arrest of action, is certain, but its nature is not elucidated by its description as 'increased resistance.' We need to have some conception of the process by which activity is permitted and prevented, and of that we have at present no discernment."

That there is indeed a difficulty is more than evident when we compare with this what Mercier said of the action of nerve-centres generally and the muscles they serve. The passage runs thus :

"That a stimulus is necessary to set the centre in action all will admit, but that another is necessary to terminate the action will be to many a new proposition. But yet it is sufficiently obvious. It is no more possible that the centre can stop of its own accord (unless, indeed, it be entirely exhausted) than that it can start of its own accord. For a centre to cease acting from sheer exhaustion is so extremely rare that it virtually never occurs in the normal organism."⁽¹⁷⁾ Further on the same author says, "We must, therefore, conclude that the action of nerve-centres is arrested . . . by the impact of an *extraneous* force."⁽¹⁸⁾

Here is not only a recognition of the difficulty, but, as I think, a foreshadowing of the way out of it. For if we suppose that the actual discharge takes place from the parts below the cortex—the mesencephalon (and, perhaps, cerebellum),—and that the cortex exercises only the function of inhibition (which function, Gowers^[19] says, is certainly exercised somewhere, and which Sherrington has shown to be *a* function of the cortex), the difficulty so completely exposed by Gowers vanishes. For it is easy to imagine that, though in disease the normal output of inhibitory current from the Rolandic cortex—the normal rate, *i. e.*, of conversion of potential into kinetic energy which the maintenance of such current implies—may be below par, there yet may be *some* store of potential energy available for conversion on particular occasions. It is, further, easy to imagine that such conversion may take time, whatever its determinants, just as the conversion of liquid nitrous oxide into laughing gas takes time, and can only continue at a rate proportional to the access of heat, or thermal energy, from without. Now when we consider the relative complexity of the processes

which determine a development of inhibition on the plane of action, it seems more than probable that such development may require a relatively considerable time.

On the one hand, it seems clear that the ultimate effect of the majority of stimuli must be mainly inhibitory ; otherwise, with a progressive intelligence and an increasing correspondence with an ever-widening environment (and the susceptibility to its manifold stimuli which that implies), man must surely have become the most restless animal on the face of the earth.

So far is this from being the case that, while a busy man is respected as one whose activity is productive, a mere busy-body is said to run about " like a dog in a fair."

On the other hand, it seems clear, too, that stimuli can only act as inhibitory influences indirectly in the first instance, *i. e.*, by a revival in sequence of a group of nerve-processes underlying a state of incipient action, and of another group of processes, the physiological substratum of some unfavourable (or painful) memory, associated with the state of action towards which those stimuli at first directly incite the organism. As the sequence of presentation and inhibition becomes fixed by repetition, the presentation itself, from being an exciting cause of action, becomes the symbol of the unfavourable memory which lapses from consciousness as the mechanism becomes organised and the process itself correspondingly expedited.

In our case it may well be that such conversion of potential into kinetic energy, which the regain of control by the Rolandic area implies, may be chiefly determined by the sequence, on innervation impulses, of the kinæsthetic impulses (unconsciously) received from the tensely contracted muscles—a state of muscle which, if too long continued, must from time immemorial have been unfavourable to the organism.

The fact that a fit can occasionally be arrested by artificially increasing the intensity of these impulses, as by forcibly resisting the movements of the limb, favours this supposition.

Furthermore it may possibly be that the action of a ligature in arresting Jacksonian fits depends partly on the principle of pressing the muscular nerve-endings as well as on the receipt of painful impressions from the skin, which tend to excite the inhibitory action of the cortex.

Moreover it is probable (as suggested by Dr. Shaw) that these kinæsthetic impressions are (some of) the first to become

associated with impressions of pain,—to exercise, that is, an indirect inhibition by awakening a memory of unfavourable experience in advance of a similar second experience. So we may expect them to be the last to be lost in disease. A round-about process such as this will obviously require time, and that time is not likely to be shortened by disease.

Here it is convenient to call to mind that just as the newborn infant is without control over its movements, so is the whole of its Rolandic cortex inexcitable. Not that it is by any means unable to move after birth, or, indeed, for some months before, for its movements are excessive simply from want of control—a control which develops *pari passu* with its pyramidal tracts and the excitability of its Rolandic cortex. Certain features of the anatomy and physiology of the inexcitable Rolandic cortex between the “motor” areas lend support to the view that the “motor” cortex and the pyramidal tracts are essentially *inhibitory* in function.

Thus it seems that after extirpation of these parts, more especially towards the frontal region, the time of spinal reflexes is shortened. And again, if these parts be stimulated by *very strong* induced currents, in the dog, we have prolongation of latency and diminution of intensity of such reflexes. Such inhibitory effects, moreover, appear more marked in the front than in the hind limbs, and to travel by both anterior and antero-lateral columns of the cord.

Now if these areas are a species of foci through which the complexus of nervous processes underlying perceptions and ideas are brought to bear on “sensori-motor” centres (or, as I should call them, inhibitory centres), and if the action of such processes, etc., is mainly inhibitory—as I have endeavoured to show,—there is no difficulty in understanding the loss of inhibitory control which follows their removal. As for the increased inhibition which follows their stimulation, it would seem that here we may have another rough imitation of painful or unfavourable stimuli transmitted along well-organised paths to the “motor” inhibitory centres and heightening their action. It remains now to see how far the inhibitory theory may serve to explain some of the principal phenomena of epileptic after-states.

First, the general distribution of symptoms as between arm and leg is in accordance with the hypothesis of inhibition.

Thus the more frequent commencement of unilateral convulsions in the arm, its greater weakness, and, more frequently, absolute paralysis, are all explicable by the supposition that the control of the arm is more specialised in one hemisphere. That paralysis may follow a "sensory" fit without any convulsive manifestation, and that it is often in inverse proportion to such local convulsions (when they do occur), requires a further explanation.

Assuming with Gowers⁽²⁰⁾ that the paralysis following a sensory fit is an inhibitory paralysis, I suggest that whereas the discharge—realised in consciousness as a sensation—actually results in the liberation of motor discharges from subcortical centres, through other than pyramidal pathways, these motor discharges are overtaken and neutralised, so to say, before their exit from the spinal cord by inhibitory currents from the Rolandic cortex through the short cut afforded by the pyramidal tracts.

The paralysis seems to me as possibly a result of the reversal now obtaining of the normal relation between the subcortical centres and those in the spinal cord. The latter are now strongly inhibited, while the former are partially exhausted.

A like explanation may serve to account for the disproportion often seen between the motor spasm experienced and the subsequent paralysis. Here, again, I suppose the paralysis to be inhibitory, but that in these cases the belated inhibition is only partially successful in arresting the convulsion.

The spasm is the outward expression of the difference between subcortical motor discharge and cortical inhibitory current; the paralysis the difference, so to say, between the remaining available innervating energy of subcortical centres and the cortical inhibitory resistance against which they have to act. So, too, with the case recorded by Gowers⁽²¹⁾ of a patient who, after a slight and transient spasm of the hand, "felt as if the arm were being raised above the head in violent spasm, while it was really hanging powerless by his side."

Here, on receipt of kinæsthetic impulses from the hand, there seems to have been a confused realisation in consciousness of the innervation current, which possibly would have proved sufficient to raise his arm above his head in the manner

described but for Rolandic interference. His feeling, I should say, was a kind of auto-suggestion.

Sir M. Foster has compared electrical excitation of the cortex to thumping a piano. But the Rolandic cortex seems to me more like the key-board of an organ, an instrument charged with motion or energy and called into action from time to time as that energy is released by the impress of external circumstances.

The Rolandic cortex is the organ for the execution of volition, and its influence on movement is like that of the driver's hands on the progress of a carriage and pair, or a cyclist's hands on that of a bicycle. While it has everything to do with the direction of the movement, it has nothing to do with energising it, and this is comparable with the action of the coachman who checks his horses first on this side and again on that. And just as after many repetitions the horses and the cyclist may progress without either conscious guidance or assent, so volitional acts become concurrently perfected and involuntary. The action of synergic muscles seems to illustrate the influence of volitions on movements. They shape the movement, so to say, by subtraction. Thus Beevor⁽²³⁾ says, "If you take hold of an iron bar and supinate as hard as you can, you will find your triceps is contracting strongly, but as soon as you flex the elbow-joint the triceps leaves off. The same thing holds good, but less so, in the case of pronation. The pronators of the arm are the pronators radii teres and quadratus; but as the former is a slight flexor of the elbow-joint, when you pronate you also flex the elbow-joint. And there, again, the triceps steps in and prevents the elbow from being flexed." The process of subtraction is clearly one of an inhibitory kind, though partial in its application, preventing one part of the action while permitting the rest.

Volition in the organism plays a part like that of law in the body politic, which, though strong to restrain, is powerless to drive, and is but a dead letter when not backed by a mass of public feeling.

In his last work, *Facts and Comments*, Herbert Spencer has insisted on the great importance of the feelings as the mainspring of action. And Mercier,⁽²⁴⁾ discussing "Freewill or Choice," says, "Granting that the willing is the choice of one mode of action rather than another, will is

only half accounted for, for we have yet to explain the power behind the mechanisms, the influence of which determines that any action at all shall be taken with regard to . . . circumstances. . . . As usually put, in every act there is the choice and the motive for the choice ; and while the choice is a matter of judgment and attention, the motive is in every case a desire, an instinct, or a *quasi*-instinct." Thus desire and choice make up the process of willing, while suspension of action during the stage of judgment and attention, and "letting go" or yielding to the prevailing desire when decision is reached, make up the execution of the will. To take one more authority, Professor William James,⁽²⁴⁾ writing of "Volitional Efforts," seems unable to come to any other conclusion than that "for scientific purposes one need not give up" Professor Lipp's theory that "so far from the feeling of effort testifying to an increment of force exerted, it is a sign that force is lost, . . . even if indeterminate amounts of effort really do occur." "Before their indeterminism," James says, "science simply stops;" *i.e.*, James is unable to identify any other factor in volition than the determining factors already dealt with. "The operation of free effort," says James,⁽²⁵⁾ "if it existed, could only be to hold some one ideal object a little longer, or a little more intensely before the mind. Among the alternatives which present themselves as genuine possibles it would thus make one effective ; and although such quickening of one idea might be morally and historically momentous, yet, if considered dynamically, it would be an operation amongst those physiological infinitesimals which calculation must for ever neglect." If volitional education is the process of suspension and letting go, less and more, in accordance with the results of trials and error—made under the impelling force of some primordial desire for further adaptation,—and the whole execution of the will is no more than this, what need have we for assigning any such function as the term "excito-motor" implies to the Rolandic cortex and pyramidal tracts, the undoubted instruments of volitional execution ?

For my own part, I suppose that the feeling of effort is the mental accompaniment of the nervous friction (if one may be allowed such an expression) entailed by the rush of nerve-currents from many associated areas towards one centre through tracts which are as yet but little pervious. Pain seems like the

friction of organic life, and the feeling of effort seems somewhat allied to it, while both friction and effort imply waste. The essence of volition with effort seems to be suspension of action, perhaps (through the pyramidal system) by the secondary, but, as we say, higher desire, pending the arrival of reinforcements of associated memories, etc., which ultimately may secure its satisfaction and its triumph over the lower desire.

Is there, however, any evidence more directly in favour of my hypothesis than that hitherto brought forward? The case published by Oebeke, and quoted by Gowers,⁽²⁶⁾ and perhaps a somewhat similar case, observed by Gowers himself, seem to furnish such evidence. Sir William's description of Oebeke's case runs as follows :—"A patient who had been liable to general epileptic fits from birth was seized in adult life with left hemiplegia, due, as was afterwards discovered, to hæmorrhage in the central ganglia of the right hemisphere. The epileptic fits continued to occur after the onset of the hemiplegia, but affected only the unparalysed side." That is the description of the case, referring to which later on Gowers again speaks of the lesion as occurring in the *central ganglia*. Interpreting the meaning of the case, Gowers says, "The arrest of conduction from the right cortex prevented the effects of its discharge, showing that the convolutions of one hemisphere cannot act on the limbs of the opposite side, at least to a considerable degree, through inferior commissural connections." But Gowers does not say whether the internal capsule was involved by the lesion, and in the absence of that evidence it seems to me as likely as not that the "*fons et origo*" of the convulsive discharges was destroyed by the hæmorrhage, or, if not wholly destroyed, was so weakened as to more or less restore the balance between its tendency to discharge and that of the presumably weakened Rolandic cortex to restrain such discharges.

Lastly, has this theory any bearing on treatment? Now certain convulsive diseases, like rickets, chorea, and hysteria, are all markedly benefited by a high proportion of fat in the diet, with massage and rest to promote its assimilation and retention as useful auxiliaries. All these diseases are characterised by a defect of control. If epilepsy shares this feature in common with the others it may be that like treatment would prove beneficial for it too in early cases. The striking value

of a fatty diet in curing rickets seems especially suggestive, as the convulsions of rickets, when neglected, seem so often to pave the way for the permanent epileptic habit.

(¹) *Psychology, Normal and Morbid*, p. 301.—(²) *Text-book of Physiology*, vol. ii, p. 723.—(³) *Allbutt's System*, vol. vii, p. 304.—(⁴) *Brain as an Organ of Mind*, 1890, 4th edit., p. 587.—(⁵) *Epilepsy*, 2nd edit., p. 215.—(⁶) *Text-book of Physiology*, p. 1132.—(⁷) Review of Hitzig's book, *Y. Med. Sci.*, January, 1903.—(⁸) Schäfer, *Physiology*, p. 712.—(⁹) *Clin. Journ.*, August 13th, 1902.—(¹⁰) Schäfer, *Physiology*, vol. ii, p. 731.—(¹¹) *Physiology*, p. 1149.—(¹²) Schäfer, *Physiology*, p. 703.—(¹³) *Clin. Journ.*, August 13th, 1902.—(¹⁴) *Expression of Emotions in Man and in Animals*, p. 351.—(¹⁵) *Nervous System and the Mind*, p. 54.—(¹⁶) *Epilepsy*, 2nd edit., p. 225.—(¹⁷) C. Mercier, *Nervous System and the Mind*, p. 73.—(¹⁸) *Ibid.*, p. 74.—(¹⁹) Schäfer, *Physiology*, p. 712.—(²⁰) *Epilepsy*, 2nd edit., p. 122.—(²¹) *Ibid.*, p. 123.—(²²) *Clin. Journ.*, August 13th, 1902.—(²³) *Psychology, Normal and Morbid*, pp. 323, 324.—(²⁴) *Psychology*, vol. ii, pp. 576, 577.—(²⁵) *Ibid.*, vol. ii, p. 577.—(²⁶) *Epilepsy*, 2nd edit., pp. 103 and 218.—(²⁷) Sherrington, *Spinal Animal*, pp. 19, 20.—(²⁸) Shaw, *Epitome Mental Diseases*, p. 223.—(²⁹) Foster, *Physiology*, p. 1149.—(³⁰) Schäfer, *Physiology*, ii, p. 704.

Further Clinical Observations in Cases of Acute Mania, particularly Adolescent Mania. By LEWIS C. BRUCE, M.D., Physician Superintendent, Murthly.

FOLLOWING up my observations made upon the blood of patients suffering from acute continuous mania read before this Association at the autumn meeting, I have been able to observe three cases of acute continuous mania in adults which relapsed while in the asylum. The results of the first series of observations were that in every case of acute continuous mania there existed a leucocytosis which persisted after recovery indefinitely. I advanced the theory that this leucocytosis was a protective leucocytosis. In the three patients who relapsed the leucocytosis was found to have fallen to below 13,000 per c.mm. of blood, instead of being nearer 20,000 per c.mm. of blood, which is characteristic of the recovered cases of mania. The polymorphonuclear leucocytes averaged 60 per cent. in two of these patients, and 47 per cent. in the third. In one of these patients the attack passed off in two days, and the leucocytosis at once rose to 25,000 per c.mm. of blood. The other two patients passed into a definite second attack, and their leucocytes averaged 15,000 to 16,000 per c.mm. of blood, with a polymorphonuclear percentage of 60 or below

60. The fact that the leucocytosis fell in each patient at the commencement of the attack, and rose at once in the patient who recovered from the relapse, strengthens the hypothesis that acute continuous mania is an infective disorder, and that immunity from maniacal attacks rests upon the resistive power of the individual patient. This hypothesis receives further support from the fact that there exists in the blood of patients suffering from acute mania a specific agglutinin. During the month of November a patient suffering from acute mania was admitted to Murthly. The patient was so ill that I did not think she would live many days. I isolated from the blood a very small coccus, which was a pure growth, but, as the patient was exhausted, I regarded the organism as a terminal infection. The patient improved, however, and three weeks later I tested the agglutinative power of her serum upon this organism in a dilution of 1 in 30. Agglutination was complete in three hours, while the serum of a member of the staff in a dilution of 1 in 20 produced no action in twenty hours. Since then I have made fifty agglutination tests with this organism. Only ten of these cases, however, have been pure cases of continuous mania. Eight gave a decided definite agglutination, one was doubtful, and the tenth—one of the patients above noted, who relapsed—gave no reaction. No "control" serum ever gave a reaction, nor did the serum of these patients suffering from mania agglutinate other organisms. The agglutinin in the blood was therefore a specific agglutinin.

With regard to the observations made on cases suffering from adolescent mania, I desire in the first place to explain what I mean by the term "adolescent mania." The term adolescent mania is used so loosely that it may include almost any of the types of mental disease seen during adolescence. The type of disease upon which the following observations were made is a form of recurrent mania. Each maniacal attack is of short duration—a few days to two or three weeks at the very outside,—and between attacks the patient is apparently quite well. The attacks invariably set in with gastric disturbance, the pulse becomes rapid, the arterial tension rises; the temperature may rise to 99° F., but rarely goes above 100° F. Sleeplessness is a constant symptom. Self-control is lost rather suddenly as a rule, and the patient becomes

acutely maniacal. The mania is of a type which might be termed delirious, as little impression is left on the patient's mind after the attack is past as to what has happened. The pupils, as a rule, are widely dilated, the tendon and skin reflexes are exaggerated, and the skeletal muscles present jerking movements and fine fibrillary tremors. As the attack wears off, the patient shows signs of exhaustion. The temperature falls to subnormal, and occasionally is paradoxical. The pulse-rate falls, sleep returns, the patient takes food greedily, and in a few days is apparently recovered. In the periods between the attacks the patient is apparently healthy, the only symptoms being a persistently high leucocytosis and a rather low temperature, which every now and then becomes paradoxical. The attacks come on irregularly ; in women sometimes at the menstrual periods, but not necessarily so. In this form of disease the menstruation in women may be irregular, but rarely suppressed, as it is in other types of insanity occurring during adolescence. A recovering patient gains weight ; the attacks come on at longer intervals, and are shorter and less severe. If recovery does not set in, each attack seems to leave some damage behind, until finally, even in the intervals between attacks, the patient is obviously insane. Even when dementia sets in there are recurrent periods of excitement with intervals of quiet. The patients were all well developed, and no satisfactory exciting cause was ever detected. Heredity undoubtedly is the predisposing cause.

The clinical observation to which, however, I devoted most attention was changes in the blood. I have fairly recently had four such cases under observation, and I examined their blood continuously,—in one case for over six months. I found that in every case there was a persistent leucocytosis, which immediately prior to an attack of mania fell somewhat, then during the attack rose perhaps as high as 40,000 per c.mm. of blood, and during the periods of interval fluctuated between 13,000 and 27,000 per c.mm. During attacks the polymorphonuclear cells were relatively increased, but at other times averaged 60 per cent. After recovery the leucocytosis persisted. A patient discharged eighteen months ago was examined last month, and the leucocytosis was 16,000 per c.mm. I have only been able to examine in three cases the agglutinative power of the blood upon the organism obtained

from the case of acute continuous mania. All three agglutinated the organism completely in a dilution of 1 in 20. The serum of six other cases of adolescent insanity which did not present the clinical symptoms of recurrent mania failed to agglutinate the same organism.

When one takes the clinical symptoms, the leucocytosis, and agglutinative action in these adolescent cases, and compares them with the same symptoms in acute continuous mania in the adult, there is a striking resemblance. Everything points to the fact that it is the same disease process modified by the age of the patient. One further fact strengthens this hypothesis. On purely empirical grounds I treated four cases of adolescent mania with antistreptococcus serum. Injected subcutaneously the serum produced no result. Given in 10 c.c. doses by the mouth, the following were the results obtained:—In Case No. 1 there was absolutely no result. In Case No. 2, within thirty minutes of the administration of the serum the patient became quieter, the pulse fell from 10 to 15 beats in the minute, and the temperature fell 1°, but the course of the attack was not arrested. In Case No. 3, within fifteen minutes of the administration of the serum the patient regained self-control, the pulse and temperature fell, and the effect lasted for about two hours. A second dose of 10 c.c. arrested the attack. Two subsequent attacks were arrested in the same way. The patient made a good recovery, and I attribute the recovery to the action of the serum. In Case No. 4 the administration of serum also seemed to arrest the attack. On such slight grounds I cannot, however, advocate the use of antistreptococcus serum in such cases. I merely record the result of an empirical experiment as adding support to the view that acute mania is an infective disorder. During the attacks of mania the patients were confined to bed and placed on milk diet. Between the attacks, exercise, baths, and diet were all used to raise the patient's resistive power to the highest pitch.

The accompanying chart illustrates the clinical symptoms of pulse, temperature, arterial pressure, and leucocytosis in an adolescent female, æt. 21, who suffered from recurrent mania. (The leucocytosis is represented by $\times - - - \times$, and the arterial pressure by $\times \dots$.) On June 28th the patient was convalescing from an attack of mania. It will be noted that the arterial tension is high and the pulse is rapid. On July 4th the

pulse increased in rapidity. The arterial tension began to rise on July 5th, and on July 6th the patient lost self-control and became acutely maniacal. The leucocytosis on July 8th rose to 26,000, and on the following day to 30,000 per c.mm. of blood. The maniacal attack was over by July 13th. Thereafter the arterial tension and pulse-rate fell, and the temperature became subnormal. The leucocytosis remained high, however, with occasional unexplainable rises, as on July 23rd, when the leucocytes were 28,000 per c.mm.

The next maniacal attack commenced on August 18th, and in every way resembled the attack shown on the chart so far as temperature, pulse-rate, arterial tension, and leucocytosis went.

DISCUSSION

At the Meeting of the Scottish Division at Glasgow, March 27th, 1903.

Dr. ALEXANDER ROBERTSON said he would like first of all to express the pleasure with which he had listened to Dr. Bruce's paper. It was very pleasing to know that so many of the younger superintendents of the asylums engaged in work of this kind. He was not, however, quite sure that he altogether understood what Dr. Bruce meant when he said that this condition of mania was an infective disease.

Dr. BRUCE.—I mean bacterial disease.

Dr. ROBERTSON (continuing) said it was a most important conclusion to arrive at. He would like to ask Dr. Bruce, and put it to the meeting generally, if the presence of leucocytosis was not likely to be the effect of the toxin, the leucocytosis helping recovery. Going further back than the toxin they might find that the cause was a varied one similar to what they had been accustomed to look for, such as strain, with, perhaps, an unstable building up of the nervous system. A very slight thing might then cause an abnormal metabolism with all its attendant effects, and he rather thought that that was the mode of progression in many cases of mania. He held that the antistreptococcus serum was very uncertain in action. He had used it, and the results were not at all satisfactory, and he would be inclined to think that the recovery in the cases which Dr. Bruce had referred to might just have been in natural course. At all events, he thought Dr. Bruce would require a far greater number of cases than he had submitted to substantiate his views.

Dr. MARR said he had listened with very much pleasure to Dr. Bruce's paper. He had no experience of the particular forms of insanity that Dr. Bruce had referred to, and had not inquired into the phenomenon of leucocytosis *qua* insanity. In some cases of acute delirious mania he had used antistreptococcus serum, but it had no beneficial effects. On the contrary, in one case it seemed to have a bad result, and he had given up using it.

Dr. GEORGE ROBERTSON said that he also had been very much interested in the paper just read, and in Dr. Bruce's facts regarding acute mania. Some eighteen months or two years ago there was a run of new cases in the hospital with which he was connected which had a typhoidal look about them, and on being examined a large proportion of them had the reaction. Since then they had continued to examine the blood, and in a great many cases—particularly those of a more or less stuporous and confused nature—it was found that the reaction was given. He had not been able to draw any definite conclusion from these facts, but he certainly thought that antitoxins developed in the blood in the course of insanity, and that good information was to be obtained by pursuing these investigations. It would likely be found that there was no particular organism, but probably a large series of organisms whose toxins produced a condition of insanity, and, amongst these, probably the typhoidal organism was one which produced a condition of stupor or

great confusion. He was sorry that his observations were not of a very definite nature, but, so far as they went, they bore out Dr. Bruce's results.

Dr. YELLOWLEES asked how Dr. Bruce had thoroughly satisfied himself that these blood changes were the cause of the nerve disturbances, and how he had become perfectly certain that they were not its results.

Dr. EASTERBROOK said he might mention that he had used antistreptococcus serum in two or three cases, but without any great result or any particular benefit.

Dr. BRUCE (in reply) said, taking up the first criticism as to how he knew that the increased leucocytosis was the cause of recovery, he had never said for one moment that it was the cause of recovery. It was merely an index of what was going on in the body of the patient. All who knew Ehrlich's theory of immunity knew what a complicated theory it was. If his contention as to the causation of acute mania was correct, then it followed that recovery from such conditions was due to the formation of some antibody in the blood and tissues of the patient. Such antibodies are produced not only by the leucocytes, but apparently by other cells which are capable of forming antitoxins in the blood. He thought, however, that most people, even Ehrlich himself, were willing to admit that the leucocytes were the cells which contributed very largely to the formation of antitoxins in the blood which brought about the result of immunity and recovery. It was wrong, therefore, to say that the leucocytosis was a cause; it was merely an index of certain tissue and chemical changes. If Dr. Alexander Robertson would do him the honour of reading the last paper which he contributed on acute mania, and which was published in the last number of the *Edinburgh Neurological Journal*, he would see that he had made continuous observations in quite a number of cases; and if he looked at the last number of the *Journal of Mental Science* he would also see that he had made observations in a good many cases where he had introduced 2 c.c. terebene into the tissues subcutaneously. The result of this was to induce a high leucocytosis. He had found that when a high leucocytosis was induced the patient almost invariably improved. He did not bring it forward as a method of treatment, but it did good in some cases, and in one or two cases it actually cut short a maniacal attack. He brought it forward more as a physiological experiment, as it was interesting to know that by inducing a leucocytosis some antibody was formed in the blood of the patient. Whether it was true or not that maniacal conditions were due to the toxins formed by a great number of organisms he did not know, but he was coming round more to the view that in a great many cases the disease was due to the toxins of a specific organism; and when they got that specific organism, then they would be able to apply the antitoxin. He thanked the members for their attention.

Some Remarks on Suicides in Public Asylums. By
HARRY A. BENHAM, M.D., Medical Superintendent, Fish-
ponds Asylum, Bristol.

GENTLEMEN,—It is now some eight years since I had the pleasure of receiving the South-Western Branch at this Institution, and I take this opportunity of expressing the pleasure it gives me to see you here to-day.

I was requested to contribute a paper at this meeting, and came to the conclusion that it might be both profitable and interesting to analyse the statistics relating to suicides which

have occurred in the public asylums of England and Wales during a given period, in the hope that a useful purpose might be achieved by a careful examination of the facts upon which these statistics are based ; and finally, that by contrasting the figures thus analysed with the ascertained facts it might be possible to discover whether, to those who, like ourselves, are responsible for the care and well-being of our patients, there are any precautions left available to reduce still further the percentages of suicides of those under our charge.

I have, therefore, taken the Blue Book annually presented to Parliament by the Commissioners in Lunacy as my basis, and subjected the figures to be found there to a tabular analysis, under headings convenient for the purposes stated, which is placed in your hands for reference ; I have also carefully considered the detailed facts set forth in the same volume, and drawn conclusions, after carefully examining the circumstances under which in each case the act of suicide was committed.

The reports available cover the years from 1890 to 1902, thus embracing a period of twelve years—sufficiently long, I think, to justify the adoption of any conclusions that may be arrived at.

During this period 201 suicides occurred, 126 being men and 75 women, out of something approximating to 788,000 under treatment, this being a percentage of 0·0025, or 2½ per 10,000. In 30 cases, 17 men and 13 women, the act was committed prior to admission. Ten men and 6 women committed suicide after effecting their escape, and 11 men and 9 women did so after being allowed out on trial. Deducting these numbers, it will be seen that 88 men and 47 women actually committed suicide whilst in the asylum. I have appended a slip to the table which I have placed before you showing the manner in which the 16 deaths happened after escape, thus reducing the suicides to 135, the number I propose to consider.

On referring to the table you will see that of these, 40 of the men and 32 of the women were regarded as actively suicidal ; and also that negligence was present in the case of 27 men and 24 women, 51 in all ; whilst in 18 cases, 10 men and 8 women, a doubt on this point existed ; so that 47·7 *per cent.* of the men were actively suicidal and 68 *per cent.*

of the women, and that negligence was found to exist in 30·6 *per cent.* amongst the men and 51·1 *per cent.* amongst the women. The conclusion to be drawn from these figures is that in both instances there was less care and discretion shown by those who were responsible for the care of the women. You will also observe that in 112 cases the act was committed by day, and in 29 by night. Of those committed by night I found that negligence existed in 18 cases, 10 men and 8 women, and in one case it was doubtful if this were so. Taking the suicides committed by night, the smaller number is probably accounted for by the fact that not only is a smaller number of hours in question, some of which are passed in sleep, but also that all the suicidal patients are at that time concentrated in observation dormitories. Such is the result of my investigations. It would be interesting to know whether an examination of the same facts and figures by, say, some of those who are listening to this paper, would lead even approximately to the same conclusions.

As to the means adopted for committing the suicidal act, hanging heads the list, a little over 50 *per cent.* of the total number adopting this method, *viz.*, 46 men and 26 women. Cut throat comes next, 15 men and 3 women having effected the act in this way.

A glance at the table will enable you to see the proportion in which other methods were successful.

I now propose to offer a few observations on the means adopted for the prevention of suicide, not with the idea that I am suggesting anything novel, but in the hope that by eliciting some exchange of experience, or even expression of opinion, I may be doing something helpful to us all in the treatment of these most anxious of all cases. It is only at these divisional meetings that we seem able to bring forward examples of our everyday work and compare notes, so to speak, to our mutual benefit and advantage.

In this asylum all suicidal and homicidal patients sleep under observation, as do all newly admitted cases, until, in the opinion of the medical officers, they can safely sleep elsewhere. For the first three nights all newly admitted patients sleep in blankets only. All suicidal patients are concentrated in two, or at the most three wards, each of which is specially staffed. Caution cards, as approved by the Commissioners in

Lunacy, are in use in these cases, and these are revised monthly or oftener. No hat-pins are permitted to be worn by nurses when on duty. In the wards the uniform cap is only permitted to be fastened with a safety pin. A uniform hat is provided for outdoor wear, to which an elastic band is attached, and nothing else is allowed to be used.

Each attendant and nurse has a locked receptacle provided in his or her room in which any sharp instrument, such as razors, scissors, etc., can be placed ; a special key being provided for the officer in each instance, thereby leaving no excuse for dangerous articles to be left unguarded.

The head attendant or deputy remains on duty until the charge night attendant has taken over the care of the house and ascertained that all the patients are alive ; and the charge night attendant remains on duty in the morning until the head attendant or deputy has resumed charge in the same manner. All medicines are taken from the surgery in locked baskets by the head attendants, who are responsible for their distribution to the various wards. Every dose is given by the charge attendant, or, in the event of absence, by the deputy, and the bottles are kept in locked cupboards in each ward.

On no pretence is any patient allowed to take anything to bed. This I regard as most important. No less than eight men and four women in the number referred to committed suicide by the neglect of this precaution, the means varying from a secreted handkerchief to a piece of sharpened tin.

No patient is allowed to leave the dormitory to go to the lavatory. Night commodes are provided, and are dealt with by the night watch when necessary at the hourly visit. This I consider a highly necessary precaution.

The vigilance of the night attendants is tested by the Cox Walker system of electric clocks and record in the superintendent's office, and any neglect to peg is at once made the subject of inquiry. In the infirmary dormitories the clock is pegged every quarter of an hour, and in others every half-hour. The most actively suicidal cases sleep in the immediate vicinity of the station of the night watch.

For some years I have adopted the plan of assembling the charge attendants and nurses and discussing with them the *pros* and *cons.* of the various suicides which have taken place during the year, particulars of which are recorded in the

Blue Book. I have found them to take an intelligent interest in the cases under review, and it has resulted more than once in the adoption of a precaution not hitherto practised here, whilst the staff have undoubtedly been made more efficient in the performance of their duty.

On referring to the table you will see that eleven men and nine women committed suicide whilst on trial.

Without going so far as to say that this practice of allowing patients out on trial is not permissible or even desirable in some cases, especially when it enables a weekly sum to be allowed, I regard the responsibility of sharing the risk with friends—some of whom, as we all know, are too eager to take it, whilst others are not sorry to find any reasonable pretext for returning a troublesome friend or relative to the asylum—as a very great one, and the above figures show that it is not unattended with risk. I may say that we very rarely resort to this method here. I am well aware that many superintendents whose judgment I value very highly are of a contrary opinion.

Holding as we do the view that notwithstanding every precaution that may be taken these catastrophes are bound to occur, I cannot, I think, do better than end with an extract from a report of the Commissioners in Lunacy contained in the Blue Book referred to, as follows :

“ The precautions which have been taken of late years have reduced the chances of suicide to a very small measure, but it seems unlikely that these acts can ever be wholly prevented. A time comes in every case of amendment when the precautions must be relaxed, and a medical superintendent, deceived by the artifice of a patient, may be led to grant such relaxation too soon ; on the other hand, in a case of real improvement, a sudden and overpowering impulse to suicide may return and may lead to self-destruction before protection can be given. To keep up restrictions beyond the time of apparent necessity has some injustice for the patient, and the greater evil of leading attendants to regard them as something less than imperative and something to be interpreted by their own private judgment. Discretion in this matter rests absolutely with the medical superintendent, a discretion which, as is shown by our returns, is exercised, on the whole, with remarkable success.”

Summary of Suicides in County and Borough Lunatic Asylums from 1890 to 1901 (inclusive).

Year.	Act committed in asylum.			Act committed before admission.			Act committed after escape.			Act committed whilst on trial or leave.			Actively suicidal.			Culpable negligence.			Doubtful or preventable.		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
1890	8	2	10	2	—	2	—	—	—	—	—	—	5	2	7	4	1	5	1	1	2
1891	5	2	7	1	—	1	—	—	—	1	—	1	2	2	4	2	1	3	2	—	2
1892	9	5	14	1	—	1	—	—	—	1	—	1	4	4	8	2	4	6	—	—	—
1893	10	6	16	—	1	1	3	—	3	—	1	1	6	2	8	1	2	3	—	—	—
1894	7	2	9	1	1	2	—	1	1	—	1	1	2	1	3	2	1	3	1	—	1
1895	5	7	12	2	1	3	1	—	1	—	2	2	1	4	5	—	1	1	—	2	2
1896	12	4	16	1	5	6	2	—	2	2	1	3	5	—	5	2	3	5	—	—	—
1897	5	4	9	1	—	1	—	—	—	—	2	2	2	4	6	3	1	4	—	—	—
1898	10	4	14	1	—	1	2	—	2	1	—	1	2	4	6	3	2	5	2	1	3
1899	10	4	14	3	2	5	—	1	1	2	—	2	4	1	5	2	1	3	3	2	5
1900	7	3	10	2	1	3	1	1	2	1	1	2	3	1	4	2	—	2	—	2	2
1901	10	10	20	2	2	4	1	3	4	3	1	4	4	7	11	4	7	11	1	—	1
Totals	98	53	151	17	13	30	10	6	16	11	9	20	40	32	72	27	24	51	10	8	18

Means adopted, viz.	By day.			By night.			Unknown.			Total.		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Hanging . . .	34	17	51	11	5	16	3	—	3	48	22	70
Drowning . . .	5	3	8	—	—	—	1	1	2	6	4	10
Cut throat . . .	13	3	16	2	—	2	1	—	1	16	3	19
Strangulation . . .	5	1	6	1	2	3	—	—	—	6	3	9
Killed on railway . . .	4	3	7	—	—	—	2	—	2	6	3	9
Killed by waggon . . .	1	—	1	—	—	—	—	—	—	1	—	1
Suffocation . . .	—	—	—	2	2	4	—	—	—	2	2	4
Jumping from window . . .	2	3	5	—	—	—	—	1	1	2	4	6
Poisoning . . .	3	3	6	—	—	—	—	1	1	3	4	7
Running head against wall or tree . . .	2	—	2	—	—	—	—	—	—	2	—	2
Swallowing hat-pins . . .	—	1	1	—	—	—	—	—	—	—	1	1
Swallowing needles . . .	—	1	1	—	—	—	—	—	—	—	1	1
Swallowing spoon . . .	—	1	1	—	—	—	—	—	—	—	1	1
Injuries to abdomen . . .	—	—	—	2	—	2	—	—	—	2	—	2
Self-mutilation . . .	1	—	1	—	—	—	—	—	—	1	—	1
Evulsion of tongue . . .	—	1	1	—	—	—	—	—	—	—	1	1
Scalding . . .	—	1	1	—	—	—	—	—	—	—	1	1
Burning . . .	1	1	2	—	1	1	—	—	—	1	2	3
Flinging self over bridge . . .	1	—	1	—	—	—	—	—	—	1	—	1
Flinging self over banister . . .	—	—	—	—	1	1	—	—	—	—	1	1
Injury by axe . . .	1	—	1	—	—	—	—	—	—	1	—	1
Totals . . .	73	39	112	18	11	29	7	3	10	98	53	151

After escape.—Hanging, 2 males; drowning, 2 males, 3 females; cut throat, 1 male; killed on railway, 5 males, 3 females. Total, 10 males, 6 females.

DISCUSSION

At the Spring Meeting of the South-Western Division, April 28th, 1903.

Dr. MILLER said that they were handicapped by the fact that their employees were people who, in ninety-nine cases out of a hundred, had some other employment to return to directly they were dismissed from the asylum, and if they got into trouble (in the case of females) they could go either into service as kitchen-maids or into one or other of the factories, thereby losing nothing by such dismissal. He dealt at some length with the modern system of construction of asylums, whereby cases of actively suicidal patients could be more carefully and easily observed by the nurse in charge. He spoke of the amount of time which was given up by the nurses to the observation of these patients, which prevented them from doing anything else. He stated that at Warwick he never allowed in any ward more than four observation cases at a time; and another rule is to limit the hours of continuous duty for nurses who are in charge of such cases. A large number of the suicides, he stated, were said to take place at night. How many take place between 5 a.m. and 8 a.m.? In his experience most of the acts are committed in the early hours of the morning, when the patients are getting up, or in the evening when they are going to bed.

Dr. MACDONALD said Dr. Benham's paper was a most interesting and practical contribution on a difficult subject. He thought with regard to these cases that the special suicidal notices should not be issued without most careful consideration by the medical staff, and that frequent consultation ought to take place, so that no special card might be continued longer than is absolutely necessary. To reduce these cases to four in a ward was, he thought, quite right, and he would like to reduce them to even less than that; and, rightly or wrongly, when he got more than three or four cases at a time he did not leave them all in one ward, it being too much strain upon the nurses. We get, he said, lots of cases which we are told are suicidal, but unless the patient has actually made an attempt I do not adopt one of the special cards, and I have not yet had reason to regret it. He spoke of the great care which should be taken to prevent patients from picking up things belonging to the attendants, and from going into their rooms.

Dr. HARTNELL spoke of the desirability of giving a change to both the patients and the nurses, and of the good which would result by transferring them from time to time to different wards. He stated that, as a rule, when once a patient had a red card on he was very loth to remove it until he had excellent reasons for doing so. He had at the present time one patient who had had one of these special cards for the last eight years, and even now she makes attempts upon her life. It is, he said, very well to blame your attendants for being careless, and to say they ought not to let these accidents happen; and he gave an instance showing how difficult it was to guard against accidents in suicidal patients.

Dr. COTTON remarked that they frequently get suicidal patients who had been sent into prison.

Dr. BASKIN referred to the question of discharging patients upon trial. He said it was quite a customary thing to discharge patients on trial, and some of them came back again. There is, of course, a great deal of difference between the discharge of a patient from a county asylum and a city asylum. In the former case the patient can be discharged much more freely—not having to return to city life.

Dr. BENHAM stated that he would have liked to hear more fully the opinion of the meeting as to the discharge of patients on trial. He expressed pleasure at listening to the various expressions of opinion, which had not always been in agreement with his own. With regard to Dr. Miller's statement that four observation cases in one ward were sufficient, he thought perhaps it might be a good thing for the nurses, but not for the patients. He stated that he had in his asylum as many as twelve suicidal cases in one ward at a time, which was specially adapted for their treatment.

Notes on Hallucinations. III. By CONOLLY NORMAN.

"C'est l'entendement qui veoid et qui oyt," dit Montaigne, et cette pensée profondément vraie doit servir de base à toute théorie rationnelle des hallucinations. Mais il est de notion vulgaire en psychologie que l'entendement ne perçoit ni la lumière ni les sons. C'est par des modifications mystérieuses des centres nerveux que l'intelligence est avertie des manifestations extérieures qui viennent frapper les organes sensoriels.—BALL, *Leçons sur les Maladies mentales*, 1890.

THE theories by which it has been endeavoured to explain the existence of hallucinations are manifold. In this field, as in so many others where we watch the play of mental phenomena, our point of view varies from time to time, so that the explanations which were once deemed more or less satisfactory become unmeaning when the problem to be solved has itself shifted ground.

The early theories as to hallucination may be described as three:

1. *The psychical theory.*—This is commonly spoken of as Esquirol's theory. Esquirol (¹) says, "A man who entertains the firm conviction that he actually perceives a sensation at a time when there is not within the purview of his senses any object capable of calling up the sensation, is in a state of hallucination. He is a visionary." Again, "Hallucination is a cerebral or psychical phenomenon which is accomplished independently of the senses." And again, "The habit of always associating sensation with the external object which usually solicits and provokes it lends reality to the products of the imagination or of the memory, and persuades the victim of hallucination that what he actually feels could not exist without the presence of external bodies. The supposed sensations of the hallucinated are images, are ideas reproduced by memory, associated by imagination, and personified by habit. Man then gives corporeal substance to the products of his understanding; he dreams while he is awake." Lélut, who is an advocate of the same general view, described an hallucination as "an idea which exteriorises itself" (*se projette au dehors*). Moreau de Tours elaborated Esquirol's comparison

of the dreamer, and even went so far as to say that very often insanity is really only the continuation of a dream. Falret and many others adopted the 'psychic theory, and it no doubt contains a certain truth, but only if it be accepted in so large and general a sense as to be of little value. It takes no account of physical conditions which cannot be overlooked in any modern study of hallucination.

2. *The sensory theory.*—According to this view hallucinations have their origin in the sensory organs themselves or in the basal ganglia. This theory is associated with the names of Foville, Luys, and Ritti.⁽²⁾ That peripheral irritation in the sense organ itself, or in the nerve-trunk, has often an important determining relation to the origin of hallucination, cannot be denied. But in most instances such irritation cannot be proved, and is not even suggested, except theoretically, so that the chief use to which these exceptional cases can be put is rather the disproof of the purely psychical than the proof of the purely sensory view.

3. *The psycho-sensory or mixed theory.*—Baillarger is commonly spoken of as the author of this theory, which received extensive support for a considerable period of time. Ball, who adhered thereto, speaks ⁽³⁾ of this doctrine as "the hypothesis according to which hallucinations are always psycho-sensory: psychical, because they have their foundation in the patient's mind, in the accumulated treasures of the intelligence and of the memory; sensory, because they always have their seat of origin (*point de départ*) in the senses." He compares the condition of affairs which produces hallucinations to a tuning-fork tuned to give a certain musical note but requiring to be struck by an external force in order that the note may be produced.

This theory takes into account two elements which undoubtedly exist in hallucination, but the mode of their synthesis is not thereby accounted for, so that it can hardly be said to offer an explanation of the phenomenon.

It should be said here that Baillarger only applied the psycho-sensory theory to a certain class of hallucinations. For another, as we shall see presently, he offered another explanation not to be distinguished from that of Esquirol.

Each of the doctrines which we have examined has apparent support in a number of observed facts, and yet each is insuf-

ficient, the last, which is the best, being little more complete than the others.

The theory which next claims consideration is that of Tamburini,⁽⁴⁾ who regards hallucination as being dependent upon an irritation of the perceptive or psycho-sensory centres in the cortex. This theory was not immediately and generally accepted when first promulgated, but it has since that time steadily increased in favour. In fact, it is so far conformable to everything that we know of the basis of sensation that in the present state of our knowledge we must almost accept it as axiomatic. We know that a sensation means a change, an occurrence—call it dynamic, molecular, chemical, what you will—in a certain portion of the cortex. We know that this is ordinarily brought about by an irritation conducted from a peripheral organ along a nerve-track. We know from the occurrence of hallucinations of vision in those who have become blind, of hearing in those who have become deaf, and of dolorific, tactile, and muscular sensibility in those who have undergone amputation of the members involved, that sensation can occur where the peripheral receiving organ has ceased to exist or ceased to receive impressions from without. On the other hand, we know from cases of deafness or blindness arising from central disease that the destruction of a cortical sense centre is followed by the obliteration of the sense in question. The conclusion, then, appears unavoidable: that of which we are conscious as a sensation is change occurring in a sensory centre; whatever its remoter origin, whatever its ulterior cause may be, hallucination also must mean change in a sensory centre—change of a similar kind to that which takes place in ordinary sensation, though not necessarily identical in mode or degree. Tamburini seems, when he first enunciated his theory, to have held that the condition of irritation in the psycho-sensory centres in hallucination is analogous to the irritation in the psycho-motor centres which gives rise to epilepsy. The similitude consists in this, that in both cases energies unconsciously stored up in the centres are set free in a manner which may be called spontaneous,—that is to say, otherwise than in response to the customary stimulant. As, however, motion, although it may be held primarily and on ultimate analysis to depend on the influence of stimuli coming from outside the organism, is yet normally related to external irritation in a

much more remote and complicated way than is sensation, it would appear that the analogy is not very close. For that reason, probably, subsequent authors have apparently not found it valuable for the better comprehension of these problems. Putting aside, then, the question of this analogy, it may, I think, be said that Tamburini's theory has now been universally accepted, and that for the present, at least, further theories can only expand or complete it.

Such expansion and completion is the aim of Tanzi, who has dealt with the question of hallucinations in a paper published in December, 1901 ("Una teoria dell' allucinazione," *Riv. di Patol. Nerv. e Ment.*, vol. vi, fasc. 12). This author believes that "while, with the classic data on the subject, it is impossible to conceive a genesis of hallucination different from that which Tamburini has formulated," certain recent physiological advances enable us now to lay down the basis of a more complete and harmonious theory.

Tanzi accepts fully the general views of Flechsig as to the existence of association centres, and believes that in these hallucinations have their origin. "The origin," he says, "of all genuine hallucinations is transcortical. . . . The mechanism of hallucination consists in the retrogression of an image, more or less complex, more or less conscious, which descends from the psychical zone into the sensory centres whence it had come" (that is, in its elements, or primarily), "and thus assumes anew the exact form of a sensation, so as to be mistaken for reality." This mechanism only operates, he believes, in pathological or abnormal conditions by anatomical paths appropriated to the centrifugal connection between the psychical or supra-sensory zone and the cortical centres of pure sensation, even though the paths in question may be normally destined for other functions more or less determinable. These paths appear undoubtedly to exist, there being fibres in the sensory centres which descend from the superior centres and seem to have a centrifugal function. Flechsig regards them as moderators of sensation; Ramon y Cajal as exercising a tonic action in connection with the process of attention. At any rate Tanzi holds that even without these centrifugal fibres it is possible, though not probable, that the superior centres may act upon the sensory centres through the paths which are usually centripetal. That this inversion of the usual direction of the current, though it

seems in conflict with the law of dynamic polarisation, is not to be absolutely excluded in abnormal conditions, appears to be indicated by the results of experiments on *Melapterurus electricus*. In this fish the electric organ is innervated by one single fibre of great size. If one of its smaller branches be dissected out from the electric organ, but not divided from the nerve-trunk, and if it be then stimulated, a complete discharge of the electric organ occurs. Therefore, in this laboratory experiment at least, there has been centripetal and centrifugal conduction along the same fibre.

In connection with this example of centripetal energy travelling along lines normally centrifugal, we must remember that Tamburini seems to accept the views of Hagen, Griesinger, and Krafft-Ebing that the irritation of the sensory centre extends itself over the entire nervous apparatus, to which it pertains as far as the extreme peripheral termination, whereby the hallucination receives the appearance of reality. Kandinsky⁽⁵⁾ observes with some force that this is illogical, as, if this be so, the theory of the localisation of hallucination in the sensory centre does not save us from calling in the whole sensory apparatus, and believing that a sensory excitation can travel along centrifugal lines. There are, however, other reasons for believing that such extension occurs, more potent, it would seem, than any necessity for a sensation exteriorising itself in order to produce the sense of reality, which should not be necessary in accordance with the main tenour of Tamburini's argument.

I may here, perhaps, refer to the observations of Max Simon, *filis*,⁽⁶⁾ on impressions residual to visual hallucinations. That author, while admitting that the fact of which we are conscious in hallucination is an occurrence taking place in the cortex, lays down that with hallucination the entire sensory tract from the cortex to the peripheral extremity is thrown into the same condition that normally exists when a true (objective) sensation is produced by an external agency acting upon the periphery, and so ultimately upon the corresponding cortical centre. He considers that this is proved by the circumstance that in some cases of hypnagogic hallucination, when the image seen is coloured, it occurs that when the eyes are opened and the image has disappeared a phantom is seen presenting colours complementary to those of the original hallucinatory image. A

great number of similar observations have been recorded. Brewster's note that the image in visual hallucination may become double when the eyeball is pressed has been confirmed by other observers. Bostock observed that the images may follow the movements of the eyes. Accepting Tanzi's view that an hallucination is a representation taking a retrogressive course and pathologically converted into a sensation, there seems to be no reason why the same retrogressive action should not be supposed as descending to the periphery, if, at any rate, the ordinary direction of transmission along a nerve-fibre can be reversed. The artificial visual hallucinations of the hypnotic state have been observed to follow ordinary optical laws, to be reduplicated by pressure on an eyeball, or by the interposition of a prism, and so forth. Yet we cannot believe that the peripheral organ is directly affected by the procedure which produces hypnosis; the influence here must come from above, whether from the sensory centres direct, or from the psychical acting through the sensory centres. That hallucinations ever have a peripheral origin Tanzi denies. Naturally he does so in accordance with his theory, and he is entitled to point out the fact that many persons afflicted with ear or eye disease suffer for months or years from "sounds" or "lights" (true, though pathological sensations), and never develop hallucinations. This contention is just, and its bearing upon the origin of illusion is important. Let us put aside cases of what is distinctly delusional interpretation, and consider mere illusion. I described in my last communication a case of a man who suffers from chronic catarrh of the middle ear, which has produced very distinct deafness in one ear. In this ear he hears the voices of his blasphemous and obscene traducers. In what sense can it be held that this man's auditory hallucinations have developed on illusions, and that these are due, again, to chronic catarrh of the middle ear (one of the commonest of diseases in our wretched climate)? Furthermore this particular patient exhibits, as I have mentioned, an interesting visual condition. He gazes into fragments of thick green glass (broken beer-bottles) and sees things and persons and moving panoramas therein. When I cannot see these objects in his talisman, he points triumphantly to the sparkling cracks produced by the lines of fracture running through the glass. Who does not perceive the analogy between the scintillations in the glass which we know this poor

man sees and the noises which we have every reason to believe he hears in his deaf ear? And how can we believe that one any more than the other is the cause of the concurrent hallucination? This man's bits of glass are to him what the magic mirror is to the Eastern necromancer—what the little pool of ink held in his palm is to the Egyptian boy whom the wizard makes see therein complicated visions. But in this latter case, not the play of light on the surface of the ink, but the suggestion of the hypnotiser, is the true cause of the boy's vision. Closely analogous, also, to the visions of my patient are many complex illusions, very close to, if not identical with, hallucinations, and owing their apparent point of origin to some simple sensory impression. Such is the experience which M. Maury relates of himself.⁽⁷⁾ In recounting this matter that author mentions that he was very short-sighted, but Ball, in quoting the case, significantly points out that Maury was particularly liable to hallucinations. Of course we know that he was subject to those hypnagogic hallucinations of which he has given so full and admirable a description. His peculiar liability to phenomena of the sort no doubt supplies, as Ball suggests, the necessary *tertium quid*. Maury's case was this:—He was crossing the Pont Neuf and saw before him a cuirassier on horseback and in full uniform. He distinguished the soldier's helmet, his plume, his cuirass, and the rest of his dress. On approaching more closely he found that the object at which he was looking was a porter carrying a large mirror-plate on his back. The sense of vision had furnished only the sparkling of the glass in the sun; the details of the cuirassier on horseback and in uniform were hallucinatory. All kinds of instances of illusion or hallucination apparently taking its origin in true sensory impression are familiar even outside disease; but it is the condition of the psychical centres which makes the difference between a true and false perception. The old proverbial rhyme says truly enough, "As *the fool* thinketh, so the bell tinkleth." Every one must have experienced how on a night journey by rail the horrible clatter of the train seems from time to time to fall into the rhythm of a familiar tune. "It is possible," says Séglas,⁽⁸⁾ "to demonstrate experimentally that a slight and vague sensory excitation is sufficient to determine the sensory form under which the intellectual action calling forth hallucination shall manifest itself (crystal-vision, shell-hearing)."

All these phenomena are intelligible without adopting the now untenable notion that the hallucinations have a mere sensory in the sense of peripheral origin, and without returning to the generalisations of Esquirol as to the purely psychical nature of hallucinations—generalisations which are too wide to be of any value in the present state of our knowledge,—provided we go a step further than Tanzi, and admit that an irritation commencing in the psychical centres can by retrogressive action descend not only to the centres of sensation, but further downwards, even to the periphery, throwing the whole nerve-tract into a state of abnormal activity.

There is a very important class of hallucinations which Baillarger⁽⁹⁾ was the first among medical writers to describe, and which he separates absolutely from the psycho-sensory. He considered that among the majority of sufferers from hallucination sensory impressions are produced as real as those which give rise to normal sensations; and such impressions, due to the double action of the imagination and the organs of sense, he called, as we have seen, psycho-sensory hallucinations. But he also held that there are hallucinations which are purely psychical. He entertained a very strong opinion on this point, saying that “these false perceptions, which we shall no longer call sensory, appear to be related almost exclusively to the sense of hearing, and cannot be confounded with true hallucinations except by the insane.” He further pointed out that psychical hallucinations had been recognised by the mystic religious writers long before physicians had noticed them. Evidently the latter observation is true, and betrays the unfortunate fact, which is so true a reproach to our craft, that we only too often decline to see facts which do not square with our preconceived theories. Since Baillarger’s time there have been added to his own excellent studies a multitude of others, pre-eminently those of Séglas,⁽¹⁰⁾ who regards the inner voice as an hallucinatory condition of the cinæsthetic centres. These “voices,” which are not distinctly heard, and yet have a strong resemblance to voices, or are described by patients as “voices” for want of any other name, are by that author regarded as depending upon an engagement of the motor speech centres. Lugaro, in his recent work,⁽¹¹⁾ has disputed the propriety of calling these conditions psycho-motor, pointing out that many of them do not present distinct motor phenomena, and preferring to return to

Kandinsky's designation of pseudo-hallucinations. It does not seem as if the designation of these conditions, so admirably and fully described by Ségla, is really a matter of much consequence, since if we regard the engagement as rather one of the function of language than either distinctly sensory or motor, we seem to escape the difficulty. Lugaro appears to fully accept the theory of Tanzi, and to desire to press it further than that author has done.⁽¹²⁾ One feels that his closely argued contention against the phrase psycho-motor hallucination is really a matter of terms rather than of facts.

His cases have been observed with most minute care, and although his main contention appears to be very disputable, we cannot but admire the power of observation which this accomplished pathologist has displayed in clinical work. He tells us that it is worth while and even necessary to apply to the analysis of a psychological phenomenon known for some time the very simple methods of old-fashioned psychiatry—examination and observation. Unfortunately, here, as in other branches of our science, facts need interpretation, and the interpretation of clinical facts in psychiatry presents certain peculiar difficulties. One of these arises from the fact that not only ordinary people, but even students of psychiatry have only a limited vocabulary with which to express the less familiar operations of the mind. When a patient talks of a "voice" that comes to him from some supernatural source, which is as distinct as the voice of his interrogator (we have all heard patients talk thus), and likewise tells us of "an inward voice" which is not audible, which is not really a voice, and which only resembles a voice by its externality and by its intrusive character, the problem that we have first to solve appears to be whether this mode of description by the patient is solely due in the latter case to the poverty of language, or whether the necessity of language is not itself an expression of the deeper fact that the thing which suddenly thrusts itself into consciousness, quite uncomfortably with the current of the patient's ideas, is not truly a sensation, essentially the same in nature as the more easily recognised pathological sensation (hallucination) of hearing. How are hallucinations to be described to us who neither experience the subjective auditory perception of the spoken, nor yet the inner voice? The former is easy of description, for every ordinary person has, like the patient, the objective sensation of hearing to serve as a

standard; but the "inner voice," when it is described to those who have not experienced it, must be likened to something else, and probably presents the same difficulty as describing colours to a blind man. A well-known medical writer on this subject (some account of whom will be found in an obituary notice at page 316 of vol. xxxvi of the *Journal of Mental Science*) had been himself the victim of "pseudo-hallucinatory" trouble, yet his account of the condition in no way clears up the phenomena which he recorded with unselfish zeal. One of Baillarger's patients, a highly cultivated lady who, in spite of long illness, had not become demented, had suffered at the beginning of her ailment from psycho-sensory auditory hallucinations. These lasted only about a year, and were followed by psychical hallucinations, from which she suffered for twenty-six years anterior to Baillarger's note. "She heard *thought* at a distance by the aid of a sixth sense, which she called the sense of *thought*." "By the aid of her sixth sense she knew all that she wanted to know, and *heard* thought at very great distances. The *voices* intermingled, and it required a great deal of attention not to confuse them together." She accepted Baillarger's challenge to engage in a mental conversation with him, and while he sat quite still she answered his supposed questions with short sentences at due intervals. (Her answers, by the way, have a manifest bearing on her delusions.) She maintained that she had heard all her physician's questions "without any sound striking her ears. The speech was clearly pronounced, the words distinctly articulated just as would have been the case if I had really spoken slowly with the object of being thoroughly understood." The patient's notion of a sixth sense seems to me to have the advantage of Baillarger's somewhat vague notion of a psychical hallucination, but in this particular instance Séglas' view as to the psycho-motor nature of these manifestations certainly offers the best explanation; the lady was talking to herself, being rather a motive than an auditive person. That she was not conscious that she spoke to herself proves nothing. Séglas rightly insists upon the fact, which had not escaped Baillarger, that many patients with psycho-motor hallucinations will, while listening to an internal voice, move their lips as if speaking, or give utterance to a low muttering sound, or even speak quite audibly, and yet maintain that they have taken no part whatever in the conversation. Now in such cases it is impossible

to exclude the action of the motor speech centres, since we have visible or audible proof of their co-operation; yet the patient is unconscious of their action, and in describing his "inward voice" may appear to be only driven to use this phrase by the necessity of language.

A case of Cramer's⁽¹³⁾ which Lugaro refers to is in the highest degree instructive, but does not appear to justify the contention of Lugaro; for here we seem to have a demonstrative proof of Ségla's doctrine that psychical hallucinations depend for their immediate mechanism on the muscular sense, however obscure the patient's description may be. Cramer's patient was a deaf mute, who had learned finger language and lip language early. He had verbal hallucinations of two kinds: obscene abuse was conveyed to him chiefly by finger language; epithets of praise and dignity were conveyed to him by lip language. Cramer interrogated him and received his replies in writing. The patient used the phrase "hear" to express his reception of his hallucination, till reminded of its inexactness, as he could not hear. He then explained, as we have said, that certain words came to him by one kind of dumb language, certain words by another. It appeared that he had not distinct visual hallucinations, and so it was pointed out to him that he did not see anyone who moved lips or fingers to communicate with him. He then fell back upon the explanation that the communication was one of mind to mind, and that it was worked by magnetism and by "a machine." Perhaps this may be a case of psychical hallucination; if so, that phrase, I submit, is so elastic as to be meaningless. It would appear, on the other hand, that this deaf mute's experiences prove Ségla's case. The higher synthesis here is the function of language, the function by which we receive and communicate ideas. The sensory centres engaged, whereby the patient was conscious of his hallucination, are the centres of muscular sense. The symbols by which this man thinks must be mainly derived from muscular sensations, though it may be admitted that visual impressions would probably be of more importance to him than to those who can hear. We who hear, in our silent thought, think more of the spoken word than the visual image; hence perhaps the relative frequency of auditory hallucinations; but among deaf mutes the conditions would naturally be different. We know that among those who hear

there is much difference between the auditive, the visual, the motive,—those who think chiefly by symbols that have their origin in heard, seen, or spoken language respectively. Cramer asked his patient, “In what language, lip language or deaf and dumb (finger) language, do you think?” and his patient answered, “Very different; the deaf and dumb never express themselves in sentences; all abbreviated.” Cramer then asked, “Do you think with the mouth?” and the patient replied, “No, not with words, only with signs.” This man, then, thought in motor symbols derived probably indifferently from the two methods of language which he had learned in infancy. That he should hear (apprehend) one class of words by lip movements and another by finger movements is analogous to the observations made by Baillarger, Ségla, and others (observations confirmed by cases described in my last paper) of patients who hear one kind of voices in their ear and another in their throat. Such cases like that curious form of unilateral hallucination in which the patient hears different voices in the two ears⁽¹⁴⁾ suggest certainly a remote cause in the supra-sensory region, but they do not exclude the activity of the sensory centre or centres.

The two following cases seem to show the intimate connection of auditory verbal hallucination with psychical or psychomotor hallucination, and even serve to indicate that they are phenomena having a point of common origin.

CASE 21,083.—Male, æt. 36, married, railway porter and soldier. Mother and a maternal aunt have been patients in this asylum. This man is said to have enjoyed good mental health till October, 1901, when, returning from service in the South African War, he found that his home had been broken up through the misconduct of his wife, who had been unfaithful to him and had sold his household goods. He then went to live with his mother, and seems to have been depressed, fretful, absent-minded, and unfit for work. Spent the months of February and March of the year 1902 in the lunatic wards of a workhouse; then lived with his mother again; and, having become threatening and violent to her, was admitted to the Richmond Asylum on August 26th, 1902. He was a well-developed, well-nourished man, free from indications of physical disease. He was depressed and hypochondriacal. Pities himself, and protested that he had done no harm, tearfully declar-

ing his love for his mother. Said he felt nervous and weak and absent-minded.

Early in September he occupied himself in farm work, though he was dull and self-absorbed. He said he "did not feel well; something came over his head which he supposed was nervousness." Later in the month he refused to work, assigning as a reason that something came across his forehead; something was in his head which prevented him.

In October, 1902, his self-absorbed manner and listening attitudes suggested hallucinations of hearing, but these he denied. When spoken to he was dull and listless, and he complained, "I am very much depressed and grieved and down-hearted." He could assign no definite reason for this condition.

On November 5th, 1902, he had an outburst of noise and violence, apparently reactive to hallucinations of hearing. These outbreaks recurred several times during the month, lasting a day or two. In the intervals he was dull, surly, and silent. On one occasion he refused food because he was persecuted and had no peace.

On November 26th, 1902, he complained that he was tormented by "voices" talking to him and crying to him continually and giving him no rest. They talk about all his past life, and they abuse him and reproach him.

In December, 1902, he improved in self-control and became tranquil. On the 23rd of that month, this note was made by me:—To-day he is dull, with fixed, stupid, and depressed expression. Of his own accord, he talks chiefly of weakness and abdominal pain, both apparently fanciful (or hallucinatory?).

When questioned does he ever hear "voices," he at once replies that he used to hear voices. "I hear them," he says, "when I am bad (*i. e.*, ill). I last heard them when I was last bad,—that is, about a month ago. They were like the voices of my mates in South Africa; they said that my mates here were against me, and things like that." Questioned as to why he had been excited, he said the voices had driven him to it; they gave him no rest. Then he volunteered this statement:—"I do not hear voices now; at least it is more like a thought that comes through my mind. A thought is put into my mind about something that happened to me and my mates in South Africa,

or something of the sort; it comes '*sudden like*.' I do not *hear* it now. It is like a thought. I only hear voices when I am bad."

The case continues under observation. Patient exhibits recurrent periods of excitement (that is, sullenness, restlessness, and violence), with alternating periods of calm, with mild depression and hypochondria. In the former conditions he hears "voices" which are associated with outbursts of rage; in the latter, "thoughts" take the place of voices.

In this case it will be perceived that the intrusive "thought" has the same character of suddenness—that is, of disconnection with what was before in consciousness—and produces the same sense of interruption that the "voices" do. "It comes '*sudden like*.'" It is also imperative—is a form of *Zwangedanke*. "A thought is put into my mind." The patient is not educated, and is not very intelligent at best. Perhaps on that account his unprompted statements to me about his case are the more valuable, as they express real and unsophisticated feelings: sensations, as I hold in either case; morbid sensations, no doubt—that is to say, hallucinations,—in both cases, but as much sensations in the one as in the other.

CASE 20,664.—Female, æt. 30, a countrywoman, of late years lay sister in a convent. Stated to be free from hereditary taint, but the family history is very imperfect. Personal history is likewise scanty. Patient had been in a private asylum, and was said to have been about six months ill when admitted to the Richmond Asylum, Dublin, on January 18th, 1902. She was a well-developed and well-nourished young woman, with a well-formed calvarium and somewhat coarse face, rather prognathous, with thick lips and receding chin. She gave one the idea that she was not a person of high intelligence, and she had a reticence of manner, perhaps due to bucolic upbringing. Quiet and precise. She said she was sent to the asylum on account of voices which she heard, which are nearly all gone now. She heard voices speaking to her from France, giving her orders. These were bad voices, telling her to do bad things, and striving to make her worse than she was. They tried to ruin her soul. She also heard some voices that seemed good, and which she tried to obey. These told her to mortify herself and to be obedient. There are some wicked persons who have the power of working upon her spirit. They endea-

voured to turn her eyes from her work. In the certificate on which she was admitted it is stated that she not only heard voices, but believed that spirits entered her body. Questioned as to the latter notion, she admits that spirits entered her body, but she believes that she has got rid of them. Has not heard any voices these two days.

January 19th, 1902.—She gave my colleague, Dr. Fleury (to whom I am indebted for most of the notes on this case), to understand that “it is nearly three months since the voices troubled her to any extent.” “Now and again it is as if a thought were put into her mind from them.” They were spirits—some good, some evil.

25th.—Admits that she has heard the voices a little since she came here, “but they can hardly be called voices now.” She seemed to describe the event that takes place at present as a sort of inward intimation, though she does not use that phrase. “There was a time when they were actual voices. They said everything. They seemed to have knowledge of all she did and said. At times she saw something like a shadow. Thinks they were spirits. It was not fancy. The good voices told her to do things that were right, and if she did not obey she had scruples.” It is noted that she is a quiet, well-behaved person, good-tempered, and helpful in the infirm ward, where she works.

February 1st.—Hears nothing the last few days. Her persecutors accuse her of things she has not done. They used to try and make her do wrong.

18th.—Does not hear actual voices, but now and again has a feeling as if some one had a knowledge of her thoughts and mind. Though it is, she says, a long time since she heard an actual voice, she will not admit that the voices were fancy. There is a tendency towards delusive belief as to the actions of the other patients being designed to annoy her.

March 18th.—Says she has been hearing the voices about two years. She sometimes obeyed them (apparently the good ones only) and mortified herself at their order. Some of the voices, on the other hand, were very vile, and wished her to do all the harm possible. She has not heard the voices much since she came to the asylum, but she thinks they are real voices.

April 18th.—Admits to notions that the nurses talk about

her rudely and call her names. This is, no doubt, delusional. She is, in fact, a silent, tranquil person, very industrious and useful, and a favourite in the ward. "Sometimes patient hears little voices, not very much. It is from people outside."

May 18th.—The people here annoy her, but not intentionally. Denies that she now hears voices, but has an experience which she finds a difficulty in describing, but which appears to be a communication of the nature of a thought which is put into her mind. Does not know who effectuates this. "Always thought there was somebody speaking to her from France."

July 18th.—"A little annoyance, not much." Sometimes hears whisperings, but does not pay attention to them. Denies that they are fancy.

October 18th.—Hardly ever hears voices now, and at any rate pays no attention to them.

December 22nd.—I suggested to her that the voices which she heard were fancy. She said, "The voices were not fancy. I imagined they were French people. Some were good, some bad. When I hear them at all now they are only whispers, but mostly I do not hear them, only a knowledge of the matter comes into my mind." This "knowledge" is, she told me, suggested by the same influences as formerly directed the voices: "I believe they are French people." There were two sorts of voices, some for her good, others striving to make her bad; some striving to put bad spirits into her, some good. "They tried to make me say and do wrong things, but I don't think I ever gave way to them." Latterly the voices have not been so troublesome; "it is now more as if I had a knowledge of some one that is speaking to me." Endeavouring to explain further, she says, "If I let myself think of the thing at all, something like a little knowledge will come into my head; but the first instant that I feel it coming—hear it coming—have some opinion of it coming"—(she used all these three phrases as if hesitating or correcting herself)—"I can keep it away by not thinking of it."

On December 29th this poor woman was discharged, as I deemed she could safely return to the community where she had served. I have not heard of her since that date.

In both these cases we have phenomena which are virtually the same—distinct auditory hallucinations, giving place to an

inward intimation which the patient describes as "a thought." The latter evidently belongs to the class which Baillarger calls psychical hallucinations, and Hagen, Kandinsky, and Lugaro pseudo-hallucinations. The fact that the "thought" is substituted for the voice, and that in the case of the woman above described they appear to be occasionally confounded, points to the essential identity of the two conditions. Furthermore both phenomena have the same intrusive, unexpected, surprising, and compulsory character, which leads the female patient to attribute both the "voice" and the "thought" to the same mystic external agency. It is true the patients distinguish the one from the other, naming one a "voice," and describing the other in terms which seem to place it among purely mental operations. To me this appears to present no special difficulty, for I have been in the habit of teaching that there is a sense of mental action, rarely appearing above the threshold of consciousness in the normal state, it is true, and differing from other senses in that respect, but often rendered very evident in morbid conditions through its disturbances. We are at present, of course, not able to point either to the exact mechanism of this sense, nor to its seat, but that should not hinder us from recognising its existence. There is still much that is obscure about the muscular sense; for a long time it was altogether obscure, but these circumstances have not prevented every one from long ago accepting it at least as a working hypothesis. I do not see under what other category save that of sensibility we can bring the many complaints of our paranoiac patients as to their mind being interfered with, their thoughts being compelled, their power of attention being destroyed, etc. The intrusive thought is regarded by the patient as belonging to an order of events identical with the ordinary sensory hallucinations. Thus I have a patient who sees indecent pictures and figures which are flashed before his eyes, hears indecent words spoken, feels that his genitalia are tampered with, and that his mind is forced to dwell upon indecent thoughts which are thrust into it. (Of course every clinical observer will recognise that this case is very far from rare.) My patient attributes all these operations to a common agency. In a manner so do I, though not in his manner. Of his hallucinations the most clearly cut are the auditory; they most closely resemble the common operation of the auditory sense; they are the most clearly

dependent upon an engagement of a cortical sensory centre. The voices are simply heard. Less distinct are the visual troubles: they are not merely described as something seen; they are visions that are flashed before the patient. The hallucinations of the genital sense have not the definiteness they sometimes possess, for they are not accompanied by distinct tactile sensations in the region of the sexual organs, but they have the disconnected and intrusive character common to the auditory and visual troubles. So also with the feeling that mental action is interfered with. The very nature of the function engaged here prevents that distinctness which auditory hallucinations so often exhibit; but we have the characteristics of a sensation—something coming from without and striking suddenly into the consciousness, something which the consciousness rather suffers than does. I fail to see how these four classes of morbid sensations can be differentiated, save by the functions engaged, or how we are to class some of them as hallucinations and some otherwise.

We may pause here for a moment to consider the occurrence of hallucinations of the genital sense, for it seems to me that the variety of forms in which we find genital hallucinations throws instructive light upon the question of pseudo-hallucinations of the other senses. Some patients experience voluptuous dreams, which we may for the present purpose consider as physiological, or they experience conditions of erethism (congestion, etc.) of the genitalia in waking moments, which are, perhaps, also physiological; these conditions have to the patient the appearance of being intrusive, and are by him or her attributed to external agencies. This we may call delusive interpretation, and liken it to the illusions of certain other senses: But other patients in their waking moments are wearied and tormented by sexual sensations unaccompanied in their inception by any special local conditions of the genitalia which may account for them, and seemingly independent of such conditions. To be sure, in many cases what begins as a mere sensation ends in excitation of the generative organs, leading, in the male, to ejaculation of the contents of the vesiculæ seminales; but this is not always the case, nor even as often as one might expect, knowing how easily complete sexual orgasm is produced in states of irritable weakness. Now in many cases we find that hallucinations of the genital sense,

subjective specific sensations, are associated with other hallucinations. The most obvious, though probably not the most common, of the other senses engaged is the tactile sense. Thus male patients complain of the genitalia being handled; female patients of sensations of dilatation of the vagina and of titillations apart from, though concurrent with, specific feelings. Sometimes there is concurrent olfactory hallucination. Male patients not unfrequently tell me that they are made to perceive odours of the female genitalia. I need hardly refer to the obscene visions and the obscene auditory suggestions to which many patients are liable,—the former, I think, relatively more frequent in men, and the latter in women. Again, we have obscene thoughts thrust into the mind, or the mind compelled to dwell upon obscene thoughts. At this extreme we border upon obsession. From time to time we meet cases exhibiting various combinations of these states, or all of them. How are we to say that some of them are hallucinations and others not? How are we to distinguish here between hallucinations and pseudo-hallucinations; between psycho-sensory and psychical hallucinations?

Is it not rather evident that a function is engaged here, and not any one sense, and that the engagement of this function may bring about the engagement of any one of the divisions of sensation which either ordinarily or extraordinarily subserve that function, or that it may indeed cause the engagement of them all?

In other words, does not this once more point to a synthesis taking place in some centre other than that from the specific activity of which we are conscious of any particular sensation? We know that in the higher nervous motor centres individual muscles are not so much represented as groups of muscles performing specific functions. The study of hallucination would seem to show that the sensory centres in the cortex are probably associated together in an analogous way. As sensation is much more complex than motion (if for no other reason, yet for this, that motion—at least the functional motion referred to—is represented in sensation), therefore the associations of sensation are of far greater complexity than those belonging to motion. Though we believe with Tamburini that the sensation of which we are conscious denotes a change in a cortical sensory centre, yet unless in case of purely elementary sensa-

tions (such as many dolorific sensations, ocular sensations of mere colour or flashes of light, auditory sensations of mere noise) we do not seem to have pure sensations; and we are therefore apparently necessitated to think either that a certain degree of synthesis of sensations takes place in the special centre of the predominant sense, or else that synthesis occurs in a higher centre receiving representations (symbols) from several centres. Such a centre is an associative centre of Flechsig, or a psychical centre, and I think with Tanzi that the examination of hallucinations seems to confirm generally Flechsig's doctrines.

(¹) Esquirol, *Des maladies mentales*, 1838, tome i, pp. 159, 191, 192, 201.—(²) Dagonet, *Traité des maladies mentales*, 1894, p. 63.—(³) Ball, *Leçons sur les maladies mentales*, pp. 111 and 112.—(⁴) Tamburini, *Revue scientifique*, 1881.—(⁵) Kandinsky, *Kritische und klinische Betrachtungen im Gebiete der Sinnestäuschungen*, 1885, p. 148.—(⁶) Max Simon defines hallucination thus:—"A sensory perception without an external object to give it birth" (compare Ball, "A perception without an object," *Leçons sur les maladies mentales*, deux. éd., p. 62; and Bianchi, "A subjective perception," *Trattato di Psichiatria*, p. 200). In another place Simon asks, "What is an hallucination in point of fact?" and answers, "A sensation which runs along a sensory nerve in a direction the reverse of normal impressions" (*Le monde des rêves*, deux. éd., pp. 72, 93, 103). Simon does not claim originality for this view, which he says was entertained by Morel, who again followed Buchez. I have not been able to verify the reference to Morel, which is rather vague; but elsewhere that author says, "I reject none of the definitions of hallucination; I give my adhesion to none" (*Maladies mentales*, deux. tome, p. 472).—(⁷) Maury, *Le sommeil et les rêves*, quatrième éd., p. 78, cf. Ball, *Maladies mentales*, p. 64.—(⁸) Ségla, "Les hallucinations unilatérales," *Annales medico-psychologiques*, 8me série, tome 6me, p. 230.—(⁹) Baillarger, *Des hallucinations, etc.*, 1846, pp. 385 et seq.—(¹⁰) Ségla, *Leçons cliniques sur les maladies mentales*, 1895, pp. 13 et seq.; *Troubles du langage chez les aliénés*, 1892, pp. 117 et seq.; and several earlier papers referred to in these works. Ségla refers to the fact that Fournié and Max Simon (see the work above quoted, p. 103) had regarded these conditions as disturbances of the function of language, and that Lélut had already suspected this connection.—(¹¹) Lugaro, "Sulle Pseudo-allucinazioni (Allucinazioni Psiciche di Baillarger)," *Riv. di Pat. Nerv. e Mentale*, Genn. e Febb., 1903.—(¹²) Lugaro, *op. cit.*, "It is probable that this fundamental disturbance depends on an elective and systematic lesion of special cortical neurons. The system engaged cannot be either sensory or motor, because the sensibility and the motor capacity are intact; nor can it be a system set apart for the association of images, because the memory and ideation are preserved; the lesion must therefore engage a system of neurons set apart for the supreme co-ordination between representations, the corresponding emotions, and the execution of acts."—(¹³) Cramer, "Ueber Sinnestäuschungen bei Geisteskranken Taubstummen," *Archiv. f. Psych.*, Band xxviii, s. 875.—(¹⁴) Exemplified in a case at present under my care, in which a female patient who suffers from auditory hallucinations hears in her right ear the voice of her priest comforting her, and in her left the voice of the devil tempting her and suggesting suicide and despair.

Superannuation Allowances for Scottish Asylum Workers. A Discussion opened by J. CARLYLE JOHNSTONE, M.D., at the Spring Meeting of the Scottish Division of the Medico-Psychological Association, Glasgow, March 27th, 1903.

Dr. CARLYLE JOHNSTONE, introducing the discussion, said: It is several years since any active steps have been taken by the Scottish Division, or by the Association itself, to obtain retiring allowances for the officers and servants of Scottish district and parochial asylums. Nothing has been done in the interval by the State or the local authorities to satisfy our reasonable claims or to remove the special injustice under which Scotland suffers. A memorial on this subject was presented to the Lord Advocate by the Scottish Division in 1877, and a similar memorial was presented to the Secretary for Scotland, Lord Lothian, in 1887. The representations of the Division were politely received, but no practical results have followed. It may be considered that it would be futile to send in a third petition; but the present Secretary for Scotland has never been approached by our body, and he may fairly consider that if we do not ask for pensions we do not want them. There is reason to believe that at any moment a Bill for the amendment of the Scottish Lunacy Acts may be introduced into the House of Commons. We should leave no stone unturned in order to secure that in this Bill provision shall be made for the granting of superannuation allowances in all Scottish public asylums. I have brought this question before the Asylum Workers' Association and the Parliamentary Committee of the Medico-Psychological Association, and both of these bodies have now memorialised Lord Balfour on behalf of the Scottish asylum workers. In my opinion our Scottish Division should do the same. The conditions of service in Scotland are so anomalous, so grossly unfair as compared with those in England and Ireland, that, if only we keep on protesting and agitating the matter, we may reasonably expect by our continual importunity to obtain justice sooner or later. At each General Election we ought to approach every candidate for Parliamentary honours, lay our case before them, and obtain from them individually, if possible, an expression of their sym-

pathy with our claim and a promise to vote for a Bill which shall satisfy this claim. This is what we ought to have done at the last General Election. I hope that this meeting will resolve that this shall be done at the next one. It does not appear to me to be opportune to approach Members of Parliament at this moment. In a decaying House, with a dwindling majority on the side of the Government and many Members proposing to go into retirement at the dissolution, we can scarcely expect Members to pledge themselves to vote for what cannot be regarded as a "popular" or "economical" measure. But we ought, I think, to get into touch with Lord Balfour at once, and make plans for bringing pressure to bear on all Scottish candidates at the General Election, which may possibly occur at an early date.

With regard to the case for pensions in Scottish public asylums, I need not say much. The arguments in favour of such pensions must be familiar to you all. Their soundness has been recognised by the Legislature in its enactments for the sister countries. They apply to Scotland with exactly the same force as to England and Ireland. What we have to protest against is the utterly unreasonable and unjust anomaly under which we labour in Scotland. Whatever we resolve to do, let us carry out one common policy; let us continue to insist that retiring allowances shall be provided for *by statute*, and that the conditions under which these allowances are to be granted shall be at least as full and fair as those which have been provided for public asylums in England and Ireland.

Dr. URQUHART understood that the Parliamentary Committee had made no suggestion for the drafting of a clause relating to pensions, but that could be considered in the future. Meanwhile they must keep pace with the times. There was no doubt that a Lunacy Acts Amendment Bill was ready to be brought before Parliament on the first opportunity, and they could not afford to let the opportunity pass. If they were really earnest about this question they must act now, and act in concert. The Association was under obligation to Dr. Carlyle Johnstone in attacking the question once more. Seven years ago a committee of the Scottish Division had obtained a report upon the position of affairs and the possibilities of action. That committee inclined to compromise, by instituting a system of self-help, especially by the annual subscriptions of individuals and

committees to the Royal National Pensions Fund for Nurses. They had the benefit of the advice of Mr. J. A. Robertson, C.A., than whom there was none more competent, relative to that Fund, which had been started with very large endowments; and they were well received by Sir Henry C. Burdett, the Founder; but there was a considerable opposition to any such scheme being advocated by this Association. That opposition was never tested in Scotland; but it had been tested in England, and the objections were so wide-spread and so great that the Scottish Committee were asked to suspend their report until the English Lunacy Bill was passed, when it was hoped that thereby pensions would be assured to the workers in the English asylums. Consequently nothing had been done to remedy the grievance under which Scotland laboured. Indeed, at the present moment they were in a worse position than formerly, because the latest Irish Act had apparently rendered pensions permissive, whereas they were formerly compulsory in Ireland. He need not detain them with the recital of how their colleagues were striving to remedy this latest injustice. In Scotland they had difficulty in bracketing Royal asylums with District asylums, because no Bill could be framed to make pensions compulsory for the first-named, depending, as they must, upon their yearly income. But the District asylums were in a different position. The officials in these institutions ought to have similar provision for superannuation to that granted to other classes of civil servants. The state of affairs in England at the present moment resembled the position in Ireland. When the latest Lunacy Bill for England came before the House of Lords the Marquis of Ripon said that Yorkshire had provided for its asylum workers in an effective manner which did not require the establishment of pensions in the future, and that he therefore must move for the deletion from the Bill of any clauses regarding pensions. It was rather startling thus to be told that Yorkshire had solved the problem in a manner satisfactory to the County Council, to the Marquis of Ripon, and to the employés of the Yorkshire asylums. But on examination it was a fraud, a palpable and gross fraud; it was a contracting-out of moral obligations on the payment of a compensation equal to about one third of the sum required. As a matter of fact nothing of the kind had been done which justified the Houses of Parliament in their dealings with this question, and the Lords

were entirely misled by the Marquis of Ripon if they attached any importance to his speech.

Had the Association learned anything in regard to this question of pensions? Did they stand where they had stood? Were they going to accept the compromise which their Committee had worked out with Mr. Robertson, the compromise that each person would have a deduction made on his salary, and that the Committee would add so much, and that in the event of a person leaving before the insurance, as it were, matured, he would get back his own contributions, the remainder going to augment the pensions of those who had not yet retired? He did not think so. He thought that they must rather depart from that position, and take their stand upon the rights of the question. He urged them to immediate action. Of course, they had no great political influence; they were not considered by Whig or Tory; but they could make themselves heard, and at any rate they had the satisfaction of knowing that what they were asking for was a real necessity in the best interests of the insane. They were charged with the interests of the insane, and in their interests they could approach Members of Parliament and the Secretary of State for Scotland. At the last election in Perth they sent a deputation from Murray's Asylum to confer with the candidates for Parliamentary honours. That business-like man, Mr. Whitelaw, at once said that, if returned to Parliament, he would vote for the establishment of asylum pensions. Mr. Wallace, the present member, said that they were preaching to the converted, and he would hold himself pledged to assist them in every way. They had the strongest possible case.

He therefore urged that the asylum workers should interview all the Members of Parliament for Scotland. He doubted if they would get anything without "lobbying" the Members, and showing them individually the justice of their claim. Unless it were shown that, besides talking and writing at large, they were determined to impress upon them individually that this was a proper concession to the Scottish asylum workers, what would they get? They might go to Lord Balfour, and receive the same polite response as they had previously got from the Marquis of Lothian:—"Yes, this is a thing that ought to be done, but I cannot imperil my Bill by the word '*pension*' within the four corners of it." While what they represented was true and

just and right, their claims were practically ignored. The Commissioners might prepare a Bill in which pensions would be authorised, knowing and sympathising as they did with the asylum workers; but when it arrived at Dover House the blue pencil might again work havoc with their claim. The Government sends through the most urgent amendments of the law; but the question of pensions was not urgent for the Government.

How long were they to go on talking? If they got every Scottish Member of Parliament pledged to support the principle that they had so long advocated, they could go to Lord Balfour and say, "Here are all your supporters and all your opponents ready and willing to confer on Scotland what England and Ireland already possess." Otherwise he (Dr. Urquhart) was afraid that they would just remain where they had stood since 1858. Members were no doubt familiar with Dr. Hayes Newington's circulars in regard to this question, and his comparison of the police service with the asylum service of the country. These ought to be carefully studied. It would not do for them to put forward any scheme in detail without very carefully considering it, but rather in the first instance occupy the broad ground that asylum workers have a right to superannuation allowances for which they have worked during the best years of their lives on salaries and allowances inadequate to make other provision for old age.

Dr. ALEXANDER ROBERTSON would only say that he approved of Dr. Urquhart's suggestion to bring as much influence as possible to bear upon the Members of Parliament. In bringing the matter before the House of Commons it would be advisable, he thought, not to bring it as a Government measure, but as an ordinary measure, backed by the support of as many Members as possible.

Dr. WATSON thought it would be most important in attempting to introduce anything of this sort into Parliament, not only to obtain the support of influential Members of Parliament, but also to obtain support from the members of the Lunacy Boards and the Parish Councils. Nobody knew better than the Chairman what might be gained by taking them into their confidence. No doubt some would oppose a scheme for pensions in Scotland unless very substantial contributions were made by those who expected pensions, and if such contributions were made he

thought the Parish Councils and Lunacy Boards might be induced to supplement them in some way.

Dr. IRELAND, in reference to the proposal that the superintendents and others in the asylums should make a compulsory deduction from their pay, said that had been done to his cost in the Bengal Army, and these compulsory deductions had stood very much in the way of their getting increased pensions from the Government. The Government looked upon it in this light,—that after so many years' service they would get £191 of retired allowance, but, at the same time, if they waited a few years they could get £300 from their own funds, making some £500. The Government did not consider where it came from; and, after all, it was taken out of the compulsory savings of the members. It would have turned out a very much better policy if the officers of the medical service had saved the money themselves, because, for example, if they retired before their time they lost all their money. He would warn them that the experiment of compulsory deductions was a dangerous one. He had not the slightest doubt that before their younger friends were prepared to retire or were gazetted out, pensions would be provided for them. As to political influence, he was extremely doubtful; for, all told, they could not elect a single Member of Parliament.

Dr. KEAY did not quite agree with what Dr. Ireland said about their political influence. He had discussed this matter with his own staff in Inverness, and had found that there were twenty-five ready to vote for the man who would support asylum pensions in the House of Commons; and if every medical superintendent took the trouble to explain matters they would find that a good many votes could be cast.

Dr. MARR said that the Glasgow District Lunacy Board, which was also the Parish Council, was at first against the principle of superannuation, but is now in favour of it. The scheme which had been brought under the notice of his board required many alterations, and was essentially a scheme of contributions on the part of the officials, on the one hand, and the District Lunacy Board, on the other hand, to the extent of 5 *per cent.* on the salaries and emoluments. It was proposed that 2½ *per cent.* should be contributed by the officials and 2½ by the Lunacy Board. The sum thus acquired would act as a superannuation fund. Despite Dr. Keay's remarks,

he knew that it was very hopeless to put forward a Bill of the nature suggested. Twenty-five votes against any Member of Parliament in or about Glasgow would not materially affect the results of any election. The advances made to get local Members of Parliament to favour the scheme had not produced any appreciable effect. While he was in favour of bringing forward a Bill to put them on the same level as English and Irish asylums, he thought the scheme to which he had referred would be the one that it would be necessary ultimately to adopt.

Dr. PARKER said that if they agreed to the principle of partial contribution by the workers they could probably work hand in hand with the Poor Law officials. Such a Bill was at present being prepared in connection with the Poor Law, and it would be unfortunate if their influence on this matter should be split, when they might possibly work together. He did not see how pensions were to be got without their agreeing to give something themselves, and his own feeling in the matter was that the most practical way, and the way most likely to be successful, was that they should agree to contribute something.

Dr. YELLOWLEES said that with the income which they had at present the asylum workers had no means of saving, and could not afford to make a contribution from their pay, because with them it would really be deferred pay. He quite agreed with what Dr. Ireland thought about that. He understood that at the meeting of the Parliamentary Committee they had in this particular matter the help of the British Medical Association.

Dr. CARLYLE JOHNSTONE.—Not in this instance ; they had nothing whatever to do with the representation.

Dr. YELLOWLEES thought they could get much more from the Parliamentary Committee of the Association, especially with the aid of the British Medical Association, which was very powerful, and which was, of course, represented very largely in Scotland.

The CHAIRMAN said that there was one thing that must be gratifying to the Association, *viz.*, that one prominent Parish Council, referred to by Dr. Marr, was in process of rapid conversion to the necessity of superannuation. Everybody connected with the Poor Law service knew that the Parochial

Boards and Parish Councils had set their faces dead against any scheme of superannuation for their officials, because in his opinion superannuation carried with it a fixity of office, and did not suit some of them who wished to have the privilege of capriciously dismissing an official, which would be lost if such a scheme were put in operation. He did not think there was a board that had not broken the law by appointing old officials to sinecures and paying them a certain salary, for which they did no duty.

Dr. CARLYLE JOHNSTONE (in reply) said that the Secretary for Scotland had been approached by the Parliamentary Bills Committee of their Association, and also by the Asylum Workers' Association of Great Britain and Ireland; and he thought that they themselves should approach him also, because Lord Balfour might say he had never heard anything about pensions in Scotland. He begged to propose that a Committee be appointed to draft a memorial to be presented to the Secretary for Scotland in favour of pensions for the workers in the Scottish district and parochial asylums. Personally, he thought it would be a mistake for them to draft a measure at the present time; but if they were to draft a measure, what they should specify should be terms as good as were enjoyed by the workers in England and Ireland. As to the altering of the word "may" to the word "shall," he did not think the alteration would ever be made. His own view was that they were asking too much in proposing to insist that every person after so many years' work in an asylum should have a pension. He would leave the question perfectly open in regard to the exact drafting of the clauses.

Dr. IRELAND seconded the motion.

Dr. YELLOWLEES said that he agreed with Dr. Carlyle Johnstone as to the use of the word "may." From personal experience he thought that the word "may" might be got, but that the word "shall" would not work out so well.

Dr. CARLYLE JOHNSTONE said he would like to add, as a rider to his motion, that, when Parliament dissolved, instructions be given to the Secretary of the Division to arrange for a meeting, or otherwise, so that they might make a combined movement upon the candidates for Parliament.

Dr. GEORGE ROBERTSON said he understood that a number of the Members of Parliament had already agreed to the

proposal. He might say that both the candidates in his district were asked, and they were both agreeable to the giving of pensions to asylum workers. If they made inquiries they would find that there was a considerable number of Members of Parliament who had agreed to pensions being given to asylum workers.

Dr. URQUHART moved, as an amendment, "That before the memorial is presented, the medical superintendents of Scotland be asked to ascertain the views of the Members of Parliament in their respective districts." He thought it would strengthen the memorial if such an action were taken, and he was quite sure, as Dr. Robertson had indicated, that they would be surprised at the amount of support that they would receive from the Scottish Members of Parliament if they only took the trouble to approach them.

Dr. ALEXANDER ROBERTSON seconded the amendment.

Dr. CARLYLE JOHNSTONE thought it was a very inopportune moment to make such a movement.

Dr. Carlyle Johnstone's motion was then put to the meeting, and was agreed to.

Dr. URQUHART further proposed that, in order that the medical superintendents might have every information before them in approaching Members of Parliament, the small Committee which he hoped would be appointed to carry out the memorial should communicate to them all the available information.

Doctors Bruce, Carlyle Johnstone, and Urquhart were appointed as a Committee to draw up the memorial.

Dr. CARLYLE JOHNSTONE proposed that the memorial should simply be transmitted to the Secretary for Scotland by the Secretary of the Division as from the Division, and they might add, of course, that they should be glad to wait upon Lord Balfour at his convenience.

Dr. URQUHART thought, in that case, that any member of the Scottish Division who would take the trouble to form part of the deputation ought to be asked to Edinburgh.

The CHAIRMAN said the Committee should have power to add to their number if any personal representation was made.

Dr. GEORGE ROBERTSON asked if the opinion of the Members of Parliament was to be obtained by the members of the Association.

The CHAIRMAN.—Yes, before the presentation of the memorial.

Dr. YELLOWLEES said that the result of such an action would be that they would be able to say they had a considerable number of Scottish Members of Parliament who were in favour of the proposal.

Frequency of Occurrence of Granular Ependyma in General Paralysis. By J. V. BLACHFORD, M.D., Senior Assistant Medical Officer, Fishponds Asylum, Bristol.

A GRANULAR condition of the ventricular ependyma has long been recognised as a pathological condition in various cases of insanity, and is so common in cases of general paralysis that we are surprised when it is not present. It is, however, by no means confined to that specific class of case, but exists in others, and, although not so frequent, is sufficiently common to make one inquire into its cause and as to its bearing, if any, on insanity.

The subject has been mentioned and discussed from time to time, but so far as I can ascertain, though hints have been thrown out and suggestions made, no positive proof has ever been afforded as to its origin.

I have examined the *post-mortem* records of this asylum for several years with a view to ascertain—(1) in what number of cases of insanity granular ependyma is found, (2) in what class of cases it most frequently occurs, (3) whether age or the disease immediately causing death appears to have any influence on its production.

Of 246 males, 64, or 26 *per cent.*, were considered to be cases of general paralysis; and of these, 44, or 68·8 *per cent.*, were found to have the ventricular ependyma granular; while in 20 it was not so.

Of 226 females, 19, or 8·4 *per cent.*, were general paralytics; and of these, 14, or 73·7 *per cent.*, had the ependyma granular; while in 5 it was not so. Besides the cases of general paralysis presenting these *post-mortem* appearances, there were 27 males

and 11 females in whom the ependyma was granular, though they did not present the symptoms of general paralysis. Of these male cases having granular ependyma, but not being certified or recorded as general paralytics, five are reported as suffering from epilepsy, and of these one had signs of syphilis and one had double stricture of the urethra. Four suffered from organic dementia; of these three had signs of syphilis and one was a case of ataxic insanity. Of the others, in three there were a distinct history or signs of syphilis, and in two others a strong probability, one having been in the army for a number of years. The other had a series of one-sided convulsions before death.

Of the eleven female cases, three were epileptics, of whom one had probably had syphilis; two were cases of organic brain disease, one of these being a case of bulbar paralysis. In two there were signs of old syphilis, evidenced in the one case by pigmentation of shin and an old scar on buttock, in the other by the history of having had ten children, of whom only three are alive (one being only twelve weeks old), and of the patient having had an epileptic seizure three weeks before death. In two the lateral ventricles are described as slightly granular, the fourth smooth, and in two no indications or anything special to note.

It will be seen from the foregoing statistics that apart from those cases in which the patients had general paralysis, the great majority suffered from coarse brain lesions, or were patients in whose previous history there was a distinct history of syphilis, or whose occupation was such as to make one suspect that they may have contracted that disease.

That it is not caused by the disease which immediately causes death is evidenced by the fact that it occurs in cases dying of epilepsy, senectus, cirrhosis, bronchitis, cellulitis, and pulmonary œdema indiscriminately; while in a large number of cases dying of the same diseases no traces of granular ependyma are found. On the other hand, it is not caused chiefly by old age, for by far the greater number of general paralytics presenting the appearance died under 50 years of age, and many at a still earlier period; and there are many cases of over 70 years in which the granular ependyma was not present. In this connection there is one significant fact, *viz.*, that although it is occasionally present in young cases this is rarely so in those above mentioned. One male was 16 years of age, a congenital

imbecile with pegged teeth, who was blind, probably the result of keratitis; and one female 17, a congenital epileptic, also with pegged teeth; while all the others not general paralytics were over 25 years, and most of them considerably over 30.

Taking those cases, therefore, which are not general paralytics, we find that—(1) it occurs more frequently in men than in women; (2) it occurs in middle or after middle life; (3) it is generally connected with some coarse organic cerebral lesion,—in all these points resembling ataxy and general paralysis, diseases concerning which there is an ever-increasing tendency to attribute their cause to syphilis.

As regards the cases of general paralysis, I am sorry that we have very little positive history of syphilis, but this fact is accounted for by the difficulty often experienced in eliciting such information.

Dr. G. E. Watson, in an analysis of twelve cases of juvenile paralysis, in eleven of which the ependyma is noted as granular, states that in eight cases congenital syphilis was certain, and that in no case could it be excluded,—very strong evidence that that disease was the common cause, or at any rate the cause of the condition of the ependyma.

Dr. J. Bolton, in a communication to the 'Archives,' discusses the occurrence of granulation of the ventricular ependyma; he states that it is common in all varieties of insanity. The examination of the above 472 cases certainly does not confirm this statement, the condition being exceptional except in cases of general paralysis or coarse brain lesions. He also suggests that it is due to the cholin and nucleo-proteid in the cerebro-spinal fluid. I have not examined specimens microscopically, but the evidence of the majority of those who have goes to prove that the granulation is due to proliferation of the neuroglia which lies subjacent to the epithelium of the ventricles, and not to any increase in the lining cells themselves, as we should expect in cases of direct irritation by the fluid of the ventricle.

Dr. Bolton, however, brings very weighty evidence in favour of the syphilitic nature of the lesion. In eighty-three cases he states that syphilis was found to exist in 59 *per cent.*, and was highly probable in eleven more.

Thus from the evidence afforded by the investigation of cases by others, not only of those of Drs. Bolton and Watson men-

tioned above, and of those which have recently occurred in this asylum, we must, I think, admit that the probability that the granular condition of the ependyma is due primarily to syphilis is strengthened; and if that be admitted the frequent occurrence in general paralytics is very suggestive of the cause of the disease.

Clinical Notes and Cases.

A Case of Chorea and Pregnancy with Insanity. By
ROBERT JONES, M.D.Lond., M.R.C.P.Lond., F.R.C.S.Eng.,
Medical Superintendent, Claybury Asylum.

J. D—, a domestic servant, æt. 21, single, admitted June 15th, 1903. Four months pregnant on admission. The family history showed that two brothers died of phthisis, and the father died of apoplexy. There was no insanity in family, no history of alcohol, nor were the parents related. Patient's heart was normal, no albuminuria, no chorea before. She was of a bright and cheerful temperament, and always steady and temperate.

History on admission.—Patient when admitted was four months pregnant. Had been much depressed for some time, but became acutely distressed after an interview with her lover. Marriage was arranged, then broken off. Grieved over being pregnant, and after a period of depression, lasting two weeks, she became noisy and excited, screaming, refusing to remain in bed, or answer questions.

On admission patient was in poor condition, exceedingly depressed, rolling about, had to be supported in a chair. Ground her teeth, and still refused to answer questions.

One week after admission she became exceedingly maniacal and noisy, and was placed in padded room.

Within two weeks of admission she developed well-marked left hemichorea. On arsenic and extra nourishment.

Within one month there was more marked mental reduction, and she could not answer the slightest question.

Three months after admission, and seven months pregnant, she was becoming worse. Her habits were defective; exceedingly noisy and restless.

Five months after admission she was confined of a stillborn child.

Eight months after admission (three months after confinement) she was quieter and more tractable.

Five months after confinement she was clean, tidy, and industrious ; considerably improved.

Seven months after confinement her ideas were much clearer, and she was pleasant in her manner, and bright.

Nine months after confinement, and fourteen months after admission, she was discharged recovered.

Patient was readmitted, after an interval of two years, on July 9th, 1896. She was again pregnant, from five to six months. The certificate stated her to be noisy, very troublesome and quarrelsome—especially at night,—and using foul and obscene language.

Her previous history was that a month ago (four to five months pregnant) she changed in her manner, but severe symptoms only occurred ten days before admission.

On admission there was great motor excitement. She pitched about and had severe choreic movements, this time on right half of body, and but slight on left. There was no aphasia, but she spoke with difficulty. When speaking she would use bad language without provocation, bite her tongue, and laugh in a silly manner. Was very irritable, wanting in self-control, and somewhat dull. She had numerous bruises from the chorea movements, but did not complain.

In three weeks the chorea improved under treatment, but it was present three months afterwards and during the last month of her pregnancy. Before labour movements were very violent, and she would have thrown herself out of bed if chloroform had not been administered. She had marked opisthotonos ; she was grateful for being held, and was sensible and apologetic between the pains, and until chloroform was administered.

The labour was normal, a male child, somewhat premature, and nearly four months after admission.

Three months after confinement chorea was still present in the hands, and there was slight mental weakness, although she was somewhat improved. She steadily improved, and one year after confinement the improvement was still maintained.

Fifteen months after confinement (nearly one and a half years after admission) she was discharged recovered. She was to have been married after her discharge, which is now nearly five years ago, and nothing further has been heard of her.

Remarks.—The relation of muscular movements to mental disturbances is one in regard to which our knowledge is limited, and one which requires further elucidation. Those of us whose practice occurs among persons admitted into asylums for the insane not infrequently have to do with cases of chorea. In our experience we find, at one end, acute motor disturbances accompanying cases of acute mania,

and at the other, cases of almost absolute muscular negativism in those suffering from what has been exceedingly well described by Hayes Newington as "anergic stupor." Between these two extremes we have all kinds of muscular movements, varying from the epileptic fit to rhythmical athetosis, paramyoclonus, and spasmodic twitchings, including also a wide range of uncontrolled movements which can only be described as hysterical.

Bodily fatigue is demonstrably injurious to thought, and Kraepelin has shown that muscular exhaustion weakens brain power in definite curves and ratios. In my experience a blunting of the faculties, indicated by loss of energy and mental dulness, is more characteristic of the insanity accompanying chorea than mania or melancholia, and the term "partial dementia" seems a more appropriate description of the mental failure. The term dementia, however, is so vague that some confusion has arisen in regard to it. Authorities differ as to its meaning; some use the term merely in regard to the intensity of the symptoms, and apply it to all cases in which there is a suspension of the instincts, volition, and thought—regardless of its pathology or its prognosis; that is to say, a set of symptoms which may be evanescent, and which are regarded as merely functional. In the present case the chorea, during the first attack, was on the left side—a distinct left hemichorea. In the same patient, in the second attack, the chorea was more marked on the right side, although there was distinct weakness of some of the muscles on the left side. Some authorities regard dementia in the light of prognosis only, and apply the term to those cases in whom there is no recovery; whilst others use the term for cases in whom a definite pathological condition exists, and in whom there is permanent brain damage due to disease, and the condition is not functional.

As to the limitation of chorea to one or other side, it is acknowledged that when the condition is unilateral the limitation is more apparent than real, for although a rhythmic and involuntary spasm is more marked upon one side, some of the muscles of the other side are also affected; and we know that bilaterally affected muscles are commissurally associated, so that when a disturbance of a certain group of neurons on one side takes place, the vibration is conducted to the corresponding group on the other side, which become, in effect, a single

nucleus, and movements which would be limited to one side transgress the median line. I believe that some cases described as chorea are not in reality true chorea, and that a group of tics, or rhythmical athetosis, or the tremor of disseminated sclerosis, or post-hemiplegic rigidity may be included in such descriptions.

As to the pathology of this condition, but little is definitely ascertained. Although chorea has been described as a cerebral manifestation of rheumatism, both rheumatism and morbus cordis were absent in my case, and there was no definite connection with hysteria. We know of one definite form of chorea, *viz.*, the senile (Huntingdon's chorea), which is almost invariably connected with mental disturbance; and in a case described by Bolton a definite change was recorded in groups of Betz cells—cells which reach their highest form of development in man, in whom co-ordinated and specialised movements attain their highest elaboration. That chorea occurs without atrophy excludes the anterior horn-cells of the cord, and that it occurs in young persons in whom there is neuronie instability, and that it affects groups of muscles, also favours the cortical neuron theory. Moreover, that it is a condition brought on by grief, worry, and various forms of emotional excitement also suggests a cortical lesion. In our case the first pregnancy of a single woman, the shame and disappointment, the great physical and mental changes which accompany pregnancy and the arousal of the maternal instincts for the first time, probably suggest disturbances in the higher cells of the cerebral cortex.

It is an accepted fact that the organ diseased may give a type to the insanity, and that women suffering from affections of the generative organs are more likely to have delusions connected with sexual matters. It is a well-ascertained fact that puerperal insanity is characterised more than any other by lewd and indecent suggestions and bad language, although in many instances it is difficult to believe that the persons affected could ever have heard or known of expressions such as they use—in such marked contrast are these to their former conduct and habits of life.

As to the date of onset, in the first attack chorea appeared after the fourth month, in the second after the fifth month, so that presumably the act of quickening had no place as a factor in causation. As to abortion being considered frequent in

cases of chorea, the patient whose case is described proceeded to full term after each of the two attacks. The severity of the chorea increased on each occasion until after delivery, when it gradually subsided—on the first occasion three months after confinement, she being well within five months of childbirth; whilst on the second attack she was not well until a year after confinement. This may suggest relief by premature delivery, but I think there are strong contra-indications to this course, and the balance of opinion is against it. As on this occasion patient went out to be married, and five years have elapsed without her readmission, one may surmise—there being no further history of her—that the habilitation as head of her husband's home, and presumably the avoidance of worry, may account for the fact that she has not returned.

As to the statement made that pregnant women are more liable to a mental breakdown when the sex of the child is male, this is another of those unfounded assertions which, once circulated, gains credence. In over fifty cases of pregnant women admitted suffering from the insanity of pregnancy into Claybury Asylum, and there delivered, the sexes of the infants were evenly divided.

A recent paper by Drs. Cecil Wall and Russell Andrews read before the Medical Society of London (May 11th, 1903) afforded a valuable contribution to the relationship of insanity and chorea in pregnant women. The paper related to chorea in pregnancy, and the authors divided their cases into those in whom chorea occurred in association with a high grade of development and in whom rheumatism was common, and those who showed signs of mental deficiency and frequently also stigmata of physical mal-development. The authors stated that the determining cause of chorea in pregnancy was usually mental worry, often caused by the fact of pregnancy. "The onset of movements at or about the time of quickening in a large proportion of the cases suggested the nature of the determining cause. Sudden shocks might also be the immediate cause of chorea. The loss of the power of control in chorea might find expression not only in the physical irregular over-action, but sometimes also in emotional outbreaks, in some cases reaching to a degree of mania or melancholia. It was suggested that chorea in pregnancy was determined by mental worry, over-strain, or shock acting upon a brain of which the

controlling power was lowered by pregnancy ; and the original stability was abnormal owing to antecedent rheumatism or chorea, or because it had never reached the normal standard of development. Of 40 cases of chorea in pregnancy, in 37 patients it occurred in the first pregnancy eighteen times. In 10 cases the first pregnancy was not attended with chorea, but chorea occurred in later pregnancies. In 6 cases it occurred in subsequent pregnancies. There was a previous history of chorea in 23 patients. There was a history of rheumatism without chorea in 5 patients. There was no such history in 9 patients. The apparent cause in these 9 cases was—shock in 2, husband out of work in 1, secondary syphilis in 1, and unexplained 5. The month of pregnancy in which the movements began was—4 in first, 3 in second, 4 in third, 9 in fourth, 7 in fifth, 6 in sixth, 2 in seventh, and 3 in last. There were 5 fatal cases, and 5 patients out of 37 were single women. The proportion of cases in which spontaneous abortion occurred was very little, if at all, higher than in ordinary pregnancy. In subsequent pregnancies there was not necessarily chorea."

Some Visceral Lesions in Acute Insanity. By GEORGE R. WILSON, M.D., Physician Superintendent, Mavisbank ; and D. CHALMERS WATSON, M.B., F.R.C.P.Edin.

In the following record two cases are described which seem to make some contribution to the question of the relation between insanity and lesions of the viscera. Dr. Wilson is responsible for the clinical record and Dr. Chalmers Watson for the pathological section of the work and for the remarks.

Miss Sixteen, age on admission, 25 ; admitted December 6th, 1901 ; duration of illness about six weeks ; diagnosis, mania following erysipelas, following malnutrition ; termination, death February 25th, 1902.

Summary of the course of the insanity.—1901.—November 1st, subacute mania. November 14th, apparent recovery in convalescent home. November 30th, relapse. December 6th,

admission to asylum in subacute mania. December 15th, apparent recovery, the patient calm and sensible. December 23rd, relapse. December 30th, menstruation.

1902.—January 4th, remission of acute symptoms and apparent incidence of convalescence. January 6th to 8th, acute mania, with delirium and some fever (99°—100° F). January 10th, remission of acute symptoms. January 15th *et seq.*, acute mania with delirium and fever (99°—102° F.). January 19th to 20th, menstruation. January 25th, improvement, but still slight fever (99° F.). January 25th to February 25th, gradual decline and prostration, restlessness, paretic and atrophic symptoms. February 25th, death.

Miss Sixteen came of a north-country stock; her parents migrated from Orkney to Edinburgh, and they and their family were strong and energetic; there is no history of insanity on either the father's or mother's side. There is, however, some peculiarity amounting almost to eccentricity, and the patient, two brothers, and a sister, as well as the father, were of an unusual personality—people of a pronounced character, whose views and ways often differed from those of their neighbours. Miss Sixteen herself was perhaps the most pronounced—undersized, spare, fair in complexion, but with great energy and determination; as a child, reserved and thoughtful, but when she did speak she often expressed wise and mature views of things, and was generally intelligent and capable. In girlhood she was studious and earnest, fond of music, a devout girl, free of all frivolities. In adolescence she evinced an independent spirit that surprised and overcame her parents; she judged everything for herself and chose her own way; those who admired her called her resolute; others called her obstinate. Of her own accord she took a post as clerk; of her own accord she gave up a good post and became a mental nurse, persisted for some years, earned her certificate, then, refusing to be advised by her parents, went in for fever nursing, which she followed for four and a half years. This characteristic is worth consideration, though it is the fashion at present to ignore the personality of patients. During Miss Sixteen's illness, when nursing and tonic treatment were vital, her resistiveness was a very important factor in preventing recovery. It was useless, even when she was calm and quiet, to try to induce the patient to do anything she wished not to do, especially in the matters

of diet and of rest ; and when she was excited the violence of her struggles in resisting the feeding-tube, the catheter, or the enema took much from the value of treatment.

There was no emotional factor of importance in the etiology of the insanity. In the early stages she brooded much over the untimely end of a free-thinking lawyer whose offer of marriage she had refused, but there is no evidence that the subject had previously worried her ; on the contrary, she expressed herself as being assured of God's approval in this matter.

The history of Miss Sixteen's health is instructive. Until she took to nursing she was freer from illness than most girls. Though spare, she was strong ; though not highly coloured, she never required treatment for anæmia. Menstruation was somewhat irregular and troublesome, but did not occasion illness or lay her aside from work. When she took to nursing, however, her appetite and digestion began to fail. This was particularly the case in the last two years, when she was fever nursing ; very often she continued to work on a starvation diet, having no relish for her meals except when she was off duty for the day. Soon after she took to the work she suffered an attack of scarlet fever, from which, however, she seemed to make a complete recovery. During this period she was also under treatment for rheumatism. At the last she was put on special duty with a virulent case of erysipelas, and at the end of it she herself incurred the disease. For a young woman of twenty-five Miss Sixteen's experience was certainly exhausting—life as a clerk, with long hours ; over two years mental nursing ; over four years fever nursing, during the last of which she disliked her food ; then a severe attack of erysipelas. As the fever and delirium passed off Miss Sixteen was left prostrate, and became excited, fanciful, and sleepless. Having been called in consultation, and in the opinion that improved bodily health would be accompanied by a return to mental soundness, we advised removal to a convalescent home in the country. There was immediate and rapid improvement in the home, and Miss Sixteen seemed quite well until one day one of her companions did something to displease her, and the patient, insisting upon having her own way, refused to be guided, began to be troublesome, and relapsed. Then she was taken to her father's house, where she ate as much or as little as she pleased, and otherwise resisted management ; so that when she was brought to the asylum in an ambulance

on December 6th, 1901, she was worse than ever—emaciated, pale, prostrate, with a very feeble pulse, dry skin and hair and tongue, cold feet and hands, and in constant and talkative restlessness. For several hours her life seemed in danger.

The notes in this case were unusually voluminous. The following seem to be essential :

December 10th, 1901 (fourth day).—Patient has been given as much as 3j, t. i. d., of Pot. Bromid., and has done very well with it. Her mania, which is now simple—mostly talking,—has subsided. She is eating a great deal, and she is stronger.

December 19th.—Miss Sixteen is fatter, quieter, and stronger, by complete rest in bed, simple diet—nearly all custard,—senna mixture, and bromide.

December 23rd.—Miss Sixteen is beginning to be excited. The bromide seems to lose its effect, and she is constantly talkative.

December 27th.—The patient is refusing food ; conscious and rational efforts are diminishing.

December 30th.—Patient is wandering steadily farther from sane influence. She is refusing food still. She is menstruating.

January 4th, 1902.—Patient seems to be recovering now. Her attack has been practically one of acute delirious mania, though with no noteworthy rise of temperature. She has twice passed urine in bed (probably a motor symptom here). Her conversation has been rambling ; she did not know where she was ; imagined herself to be up ; said or asked the same things again and again, and was very persistent in refusing food and in refusing to move. The treatment during this crisis, as it has been—the patient very weak, the pulse extremely shabby, the eyes squinting, the mouth covered with sordes, the tongue dry, brown, and cracking,—the treatment has been by rest and rectal feeding, with strychnine and strophanthus when she could be persuaded to swallow, and an occasional sulphonal suppository.

January 6th, 1902.—This patient has relapsed and is very ill. She has screamed nearly all last night and the previous night, and the heart is flagging.

January 7th, 1902.—Last night the patient was less noisy, but only because she is weaker. She screamed as if in agony—a sudden yell as if startled by a shooting pain (pleurisy, meningitis, or peritonitis),—and the least touch seemed sore, as if there were neuritis all over. To-day her temperature is 99° F., though her extremities are cold. There is no doubt, I think, about the neuritis. I cannot discover any pleurisy or peritonitis. The patient's breath is very bad—the odour suggestive of the decay of approaching death. About 1 a.m. the patient was constantly noisy, and I passed an œsophageal tube (the pulse practically gone in the process) and administered 3ij Hyp. Emuls. (Parald., Bromidia, and Pot. Brom.) in hot water ; also some hot milk, after which she slept. At 4 a.m., as she seemed weaker and was wakeful, I injected strophanthus and strychnine into the buttock, and she rallied and slept until about 8 a.m.

January 8th.—This morning the patient, having passed much urine in bed, collapsed after the exertion of changing. Dr. Duncan found her at 9.30 semi-comatose; pulse about 150 and shabby; respirations about 45 and very shallow. Brandy, strophanthus, and strychnine were administered *per rectum*. She has now (12 noon) rallied.

January 9th.—Patient calmed somewhat during the night and slept. The respirations came down to about 36, the pulse to 118. At 9.30 the patient again "fainted," and was restored by strophanthus and strychnine. Throughout the day Miss Sixteen screamed loudly at times, but took some food. At 10 p.m. she "fainted" again. Paral. 3ijj was injected *per rectum*, and by 11.30 the patient was quiet and stronger, and said she would sleep.

January 10th.—Patient had a much better night. She was disturbed early by mucus and a little blood in the throat (note this again after tube which was passed yesterday evening), but slept when nurse cleared throat by finger. During the day the patient swallowed a considerable quantity of food.

9.30 p.m.—Strength steadily increasing. She laughed a great deal during our interview; knew me quite well, and took an interest in what went on.

January 11th.—Patient had a good night. Passed a pale, liquid stool, not so offensive as yesterday. Took food freely from her nurse this morning, milk in the forenoon, and a cupful of veal soup later.

January 11th to 15th.—Temperature subnormal; patient in all respects better, but very weak. She is having salol.

January 22nd.—Patient has suffered another relapse. The temperature has been higher this time, though never more than 102° F. As a result of a bruise from the edge of the bed-pan between the converging folds of the buttocks, a sore has begun over the sacrum—at first a blackening patch the size of a sixpence, but obviously about to slough. The delirium was deeper and more constant than formerly, but quieter, with less excitement.

January 26th, 1902.—Patient has been menstruating these past days. The temperature is down. She is quieter, but very aphasic and metaphasic. When her attention is not caught her mind wanders. She passes urine incontinently. The slough is about the size of half a crown, to the depth of a quarter of an inch, with much burrowing under the skin all round, but healing well. The pulse is constantly 110—120.

January 29th, 1902.—The stools (always pale), which were formerly very offensive, are so no longer. The sore is doing well. She was raised to-day, and could stand a little. In trying to walk the right leg swung across the left at each step, and was much more ataxic than the left. Confusion is considerable, and there is distinct aphasia, also impaired articulation. The right arm and hand are not disproportionately affected. The strabismus and the ptosis, which were worse on the left side, have now nearly gone.

January 30th.—This morning she seems to me stronger and clearer than she has been. She has hallucinations, however; squeals as if in pain, but denies pain; and it seemed to me to-day that one of her squeals was occasioned by some vision, probably of an unpleasant, or at

least startling nature. She has begun to be resistive. Salol was stopped three days ago.

February 16th, 1902.—There has been an alarming fall in temperature. The digitalis and occasional ergot are continued. The patient is obviously weakening. Diarrhœa has set in. Salol is resumed. All water is boiled, and nothing irritating or easily decomposed is given. The stomach is irritable. The back seems to be healing. One cannot carry out treatment, but must be guided by the patient's whims, which are quite inconsequent.

February 23rd.—Miss Sixteen's temperature has been down beyond the reach of the clinical thermometer (see Chart). She is on a water-bed, and that has been practically filled twice daily with almost boiling water. Coffee and other hot drinks have been administered, but the temperature will not come up. The incontinence is persistent, and the diarrhœa; the menstruation has ceased.

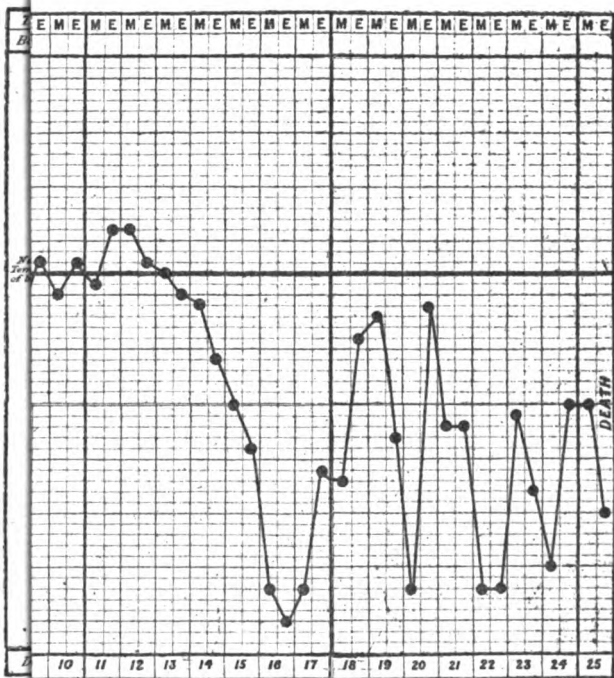
February 25th, 1902.—At about 12.30 p.m. to-day Miss Sixteen died. The diarrhœa had diminished with chalk. At the end her heart failed rather rapidly. Since this patient came to the house there have been more than the normal number of whitlows and pustular eruptions, and one rather severe (locally) case of erysipelas.

Miss Seventeen, admitted November 11th, 1902, æt. 39. Acute Mania following many previous attacks; rapid progress of the disease, and speedy death on December 7th, 1902.

Miss Seventeen's case so closely resembles that of Miss Sixteen in essential features that it is unnecessary to enter fully into details. In this case the patient had not suffered bodily illness immediately before her attack of mania, but she had passed through several mental attacks.

Miss Seventeen was poorly developed and ill-nourished, anxious-minded, and somewhat exacting all her life; but very gentle, and devoted to the service of other people. She had not suffered grave bodily illness, but she was a victim of habitual constipation, with occasional attacks of diarrhœa. She was thirty-nine years of age, and during the last twenty years of her life she suffered many attacks of mental derangement, nine of them so severe as to require asylum treatment. She had repeatedly been suicidal; even in the intervals between her acute attacks she was discovered to be in possession of poison; and on more than one occasion her life was despaired of because of exhaustion following acute mania.

She was admitted to Mavisbank on November 11th, 1902, weak and emaciated, restless, incoherent, and sleepless, with a poor, irritable pulse and exaggerated reflexes, and very constipated, but not suffering



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a violent mania. For the first week there was marked improvement; then a relapse followed, and on December 5th Miss Seventeen was in acute mania, with furred tongue, foul breath, marked constipation, and suppression of urine, dry hair and skin, almost no appetite, and a rapid, weak pulse. Her temperature was subnormal, but variable. The blood-count revealed nothing unusual; the last film taken (about ten hours before death) showed wide-spread bacterial infection. She had delusions of pregnancy and hallucinations of sight and of hearing, but soon became incoherent. This condition developed rapidly into muttering delirium, with collapse, and on December 7th Miss Seventeen died.

Post-mortem Appearances.

Summary.—Dilatation of stomach and duodenum, enlargement and caseation of mesenteric glands, chronic gastrointestinal catarrh, localised pulmonary areas of pneumococcal infection with fibroid changes around, sclerosis of the bony system with profound alterations in the bone-marrow, enlargement of the thyroid gland, brain cortex congested, and chromatolysis in the nerve-cells.

Post-mortem examination on Miss Sixteen.—This was made forty-eight hours after death. The body was markedly emaciated. On exposing the viscera the stomach was found to be enlarged and displaced downwards, its lower border being $1\frac{1}{2}$ inches below the umbilicus. The mesenteric glands were enlarged, and two of them were caseous. A general examination of the thoracic cavity showed fine adhesions over the upper part of both lungs, especially the right; there were no indications of recent pleurisy. The alimentary tract was removed *en bloc*, and washed through first with water and then with 5 *per cent.* formalin. The whole tube was then moderately distended with the formalin solution and secured above and below, its general examination being made on the following day.

Abdominal viscera.—The stomach was much dilated. Its transverse diameter at its broadest part was 12 inches; the great curvature measured $21\frac{1}{2}$ inches, and the small curvature 8 inches. The duodenum was also dilated, its transverse diameter when opened being 5 inches. The mucous membrane lining the stomach and intestine was in a state of chronic catarrh, this being most evident in the lowest part of the ileum, stomach, duodenum, and ascending part of the colon. The jejunum and upper part of the ileum appeared fairly normal. The catarrhal condition was most pronounced in the lowest 12 inches of the ileum, the point of maximum intensity being 4 inches from the ileo-cæcal valve, where minute ulcerations were visible to the unaided eye. There was no evidence of tuberculous disease. The *liver* showed some fatty change, also congestion. The *spleen* was normal in size, but of softer consistence than in health. The *supra-renal glands* were markedly congested. The *kidneys* showed no gross change. The *pelvic viscera* appeared healthy.

Thoracic viscera, etc.—The heart was unusually small in size. The cavities, valves, and heart muscle showed no abnormality. The lungs were oedematous and congested at the bases. The bronchi showed evidence of acute and chronic congestion. At the periphery of both lungs just underneath the pleura there was a number of small areas of consolidation, of fairly firm consistence and a white colour, the lung tissue around being specially congested. Some of these areas were enclosed by a dense band of fully formed fibrous tissue. There was no indication of tuberculous disease. The thyroid gland was unusually large, but otherwise presented a normal appearance. An examination of a complete vertical section of a femur showed the marrow to be abnormally red, with areas of gelatinous change throughout. A piece of rib was taken for histological examination.

Microscopic examination.—An examination of the brain, kindly made for us in both cases by Dr. Ford Robertson, showed the chromatolytic changes characteristic of acute disturbance of nutrition. The distinct histological changes present in the viscera of Miss Sixteen will now be described. The pieces of stomach and intestine examined were embedded in paraffin. Figs. 3, 4, and 5 illustrate the condition of the mucous membrane of the cardiac, middle, and pyloric ends of the stomach respectively. These should be compared with Fig. 1, which illustrates a fairly normal mucous membrane, which is seen to consist of long rows of tubular secreting glands, the irregularity on the surface of this section representing unavoidable *post-mortem* changes. A study of Figs. 3, 4, and 5 shows an atrophy of the mucous membrane, also a disappearance to a great extent of its glandular elements, which are replaced by large numbers of small round-cells; also a thickening of the submucous coat. The reader will observe that all trace of glands has disappeared in the section illustrated in Fig. 3, and the surface of the mucous membrane is here covered with a thick layer of tenacious mucus. The mucous membrane of the duodenum showed similar changes. The jejunum and upper part of the ileum, which revealed no distinct change to the unaided eye, showed pathological changes of a less advanced character. The results of the examination of these parts confirmed us in our belief that any opinion as to the integrity of the intestinal tract based only on naked-eye appearances is valueless. As previously indicated, pathological changes were most manifest in the lower end of the ileum. Fig. 7 represents a section of the mucous and submucous coat of the ileum, nine inches above the ileo-cæcal valve. There is a considerable degree of fibrous thickening of the submucous coat, many of the vessels of which are enormously dilated. The mucous membrane is in a condition of marked atrophy. The normal appearance and arrangement of the villi have entirely disappeared, the villi for the most part being represented by little masses of granulation tissue or a more fully formed fibroid tissue. In other parts of the ileum the cellular proliferations and other evidences of catarrh were very pronounced (Fig. 8). This change was most marked in and around Peyer's patches, but was diffusely present. A similar pathological change was present in the ascending colon, represented in Fig. 9, which shows profound changes in the mucous and submucous coats.

Microscopic examination of the peripheral lung lesion previously described showed the areas to be composed of great numbers of small round-cells, with few catarrhal cells. Suitable staining revealed large numbers of Fraenkel's diplococci in these areas. Fig. 10 shows a low power of the affected part of the lung. Note that the areas are enclosed by a thick band of fibrous tissue. The other viscera showed no distinct histological lesions, with the exception of the bone-marrow, spleen, and the thyroid gland. Unfortunately it is impossible to submit a report on the histological appearances of the rib, as it was found impossible to properly decalcify the section, and as a result paraffin sections could not be obtained. In sections prepared in celloidin the cellular elements had to a great extent disappeared. The great difficulty encountered in decalcifying the section is significant as indicating an important change in the constitution of the bone. The histological appearances of the spleen were those of increase in the number of hyaline leucocytes and marked proliferation of endothelial cells. Reference was previously made to the existence of an enlargement of the thyroid gland. Microscopic examination showed that the spaces were abnormally large, and the great cellularity of their walls seemed to be considerably in excess of what could be accounted for by mere tangential section of the organ; the appearances represented an early stage of cystic enlargement of the gland.

Summary.—Dilatation of stomach with pronounced atrophy of its coats, chronic intestinal catarrh, marked deposit of pigment in spleen and liver, slight interstitial changes in the kidneys, chronic disease of the bladder, sclerosis of the bony system with profound alterations in the bone-marrow, brain cortex congested, and chromatolysis in the nerve-cells.

Post-mortem examination of Miss Seventeen (conducted within eight hours of death).—*Summary.*—The body was markedly emaciated. The stomach was slightly dilated. The mucous membrane of the alimentary tract was in a condition similar to that described in the previous case. Unlike that case, however, the point of maximum intensity of disease was the stomach, the wall of which over a large area was in a state of extreme atrophy. This is represented in Fig. 2, which shows great attenuation of the stomach wall, with disappearance of the mucous membrane. The liver showed marked venous congestion, slight cellular infiltration in the portal tracts, and an unusual degree of pigmentary change in the liver-cells. The kidneys showed congestion, with early interstitial changes. The spleen also showed congestion, with a great amount of pigment deposit. The bladder wall was much thickened, and on microscopic examination very marked changes were present in all the coats. The epithelial lining had disappeared, the mucous membrane being represented by a thick band of organised granulation tissue (see Fig. 11); the submucous tissue was greatly increased, and showed pronounced thickening of the walls of the blood-vessels (*q. v.*); the muscular coat was much thickened, the thickening being in part due to

proliferation of the muscle-fibres, and in part to extensive overgrowth of fibrous tissue. The naked-eye appearances of the bone-marrow were similar to those described in the other case; as formerly, great difficulty was encountered in decalcifying the section of rib.

Remarks.—The points to which we wish to draw special attention are (1) the situations of the lesions found at the *post-mortem* examinations; (2) the nature of these pathological changes; and (3) the advisability of further observations on the pathology of acute insanity being conducted along the lines indicated.

1. *The situation of the lesions.*—In the case of Miss Sixteen very pronounced pathological changes were present in the gastro-intestinal and respiratory tracts, although clinically there were no distinct indications of the existence of such lesions. The parts of the alimentary tract which showed the most striking changes were the stomach, duodenum, the lowest part of the ileum, and the ascending colon. In the respiratory tract the lesions existed at the peripheral part of the lungs, just underneath the pleura, and also in the large and small bronchi. Special attention should also be directed to the changes described in the bone-marrow. In the case of Miss Seventeen the gastro-intestinal tract was also the seat of profound morbid changes. Here, again, we have to record that the clinical symptoms failed to indicate the severity of these lesions. An examination of the respiratory tract in this subject did not reveal any defined lesions such as those recorded and illustrated in the case of Miss Sixteen, but the large and small bronchi showed changes similar to those described. Investigation of the utero-vaginal tract revealed the presence of a small, pedunculated, submucous polypus just within the cervix uteri. The size and position of this small tumour precluded its discovery by the ordinary methods of clinical examination. Even the passage of a uterine sound would in all probability have failed to reveal any abnormality. These points are important as indicating the facility with which a possible source of irritation may easily be overlooked. The changes in the bone-marrow were similar to those recorded of the previous case. A special feature of this case was the pronounced thickening of the wall of the bladder; this will be further referred to.

2. *The nature of the lesions present.*—If we except the small



FIG. 1.—Mucous membrane of normal stomach, to show the thickness and normal appearance. The irregularity on the surface is unavoidable *post-mortem* change (cf. Pl. I, fig. 2, Pl. II, figs. 3 and 4, and Pl. III, fig. 5). $\times 50$.

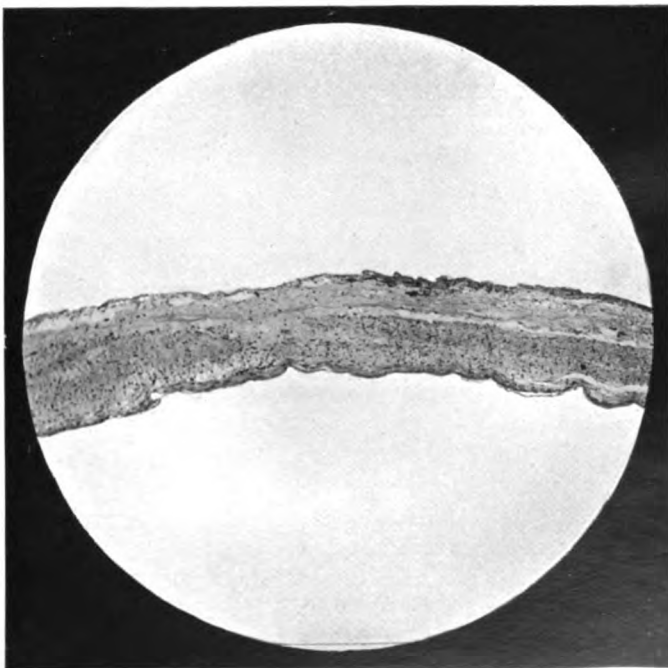


FIG. 2.—Section of the entire thickness of the stomach wall of Miss Seventeen. The mucous membrane has practically disappeared, and the other coats are considerably atrophied. $\times 50$.

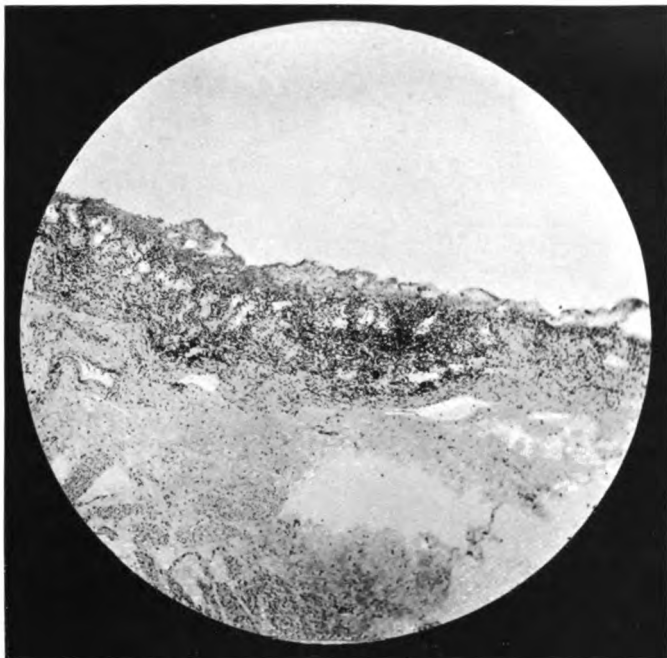


FIG. 3.—Cardiac end of stomach of Miss Sixteen. Shows *a*, marked atrophy of the mucous membrane; *b*, disappearance of the glands; *c*, great cellular infiltration; *d*, prominent thickening of submucous coat; *e*, a layer of mucus is seen on the surface. $\times 50$.

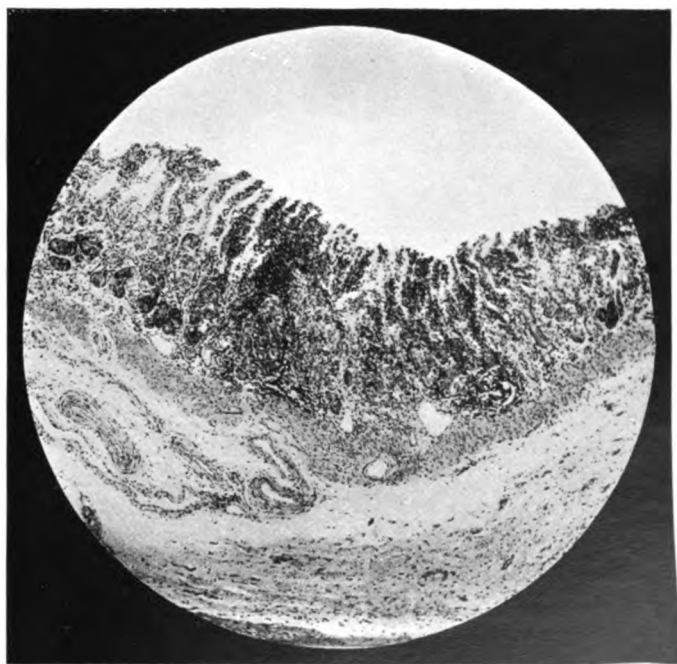


FIG. 4.—Middle of stomach. Changes similar to those in Fig. 3. $\times 50$.

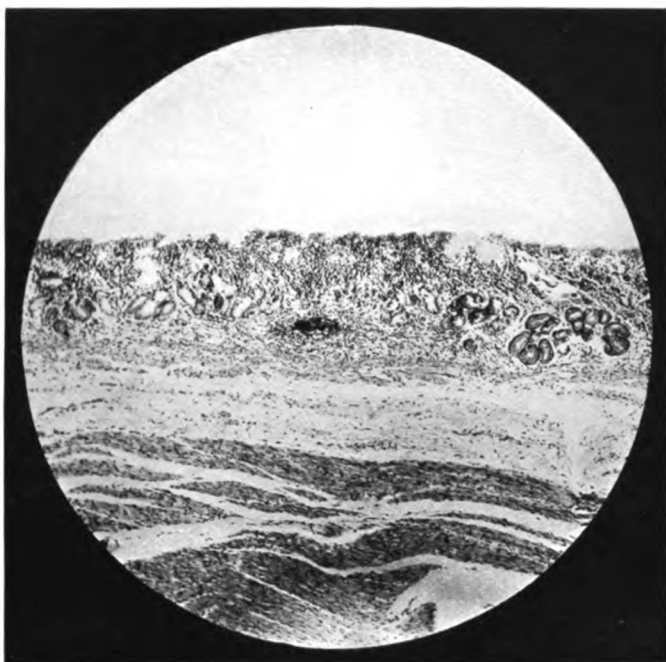


FIG. 5.—Pyloric end of stomach. Changes similar to those in Fig. 4. Note the remains of the glands. $\times 50$.

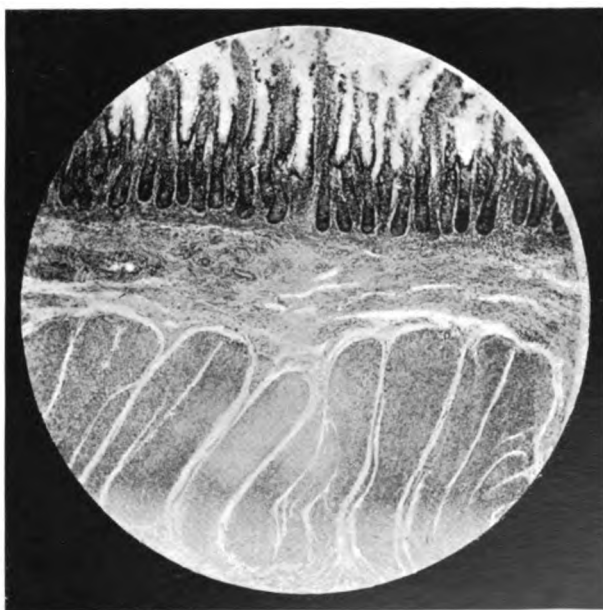


FIG. 6.—Ileum, nearly normal. For comparison with Fig. 7.

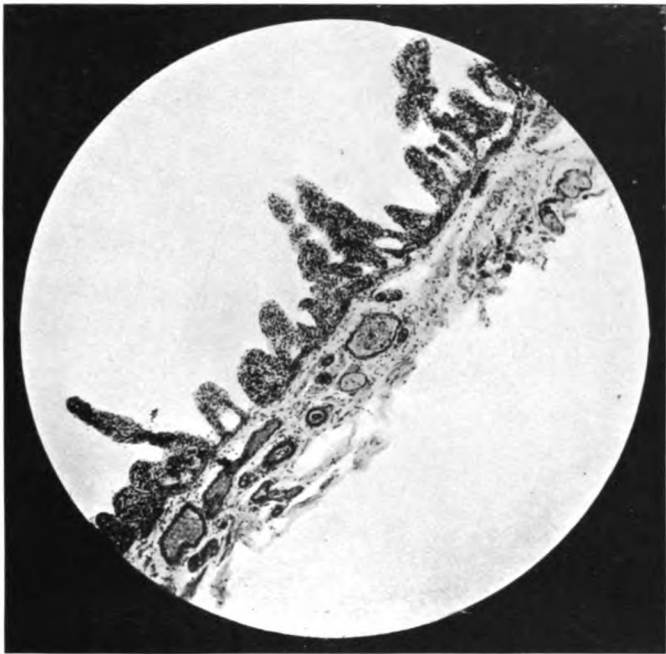


FIG. 7.—Ileum; extreme atrophy of mucous membrane. The villi are represented by small areas of granulation tissue, or more fully formed fibrous tissue. Note the thickening of the submucous coat, with great engorgement of its vessels. $\times 50$.

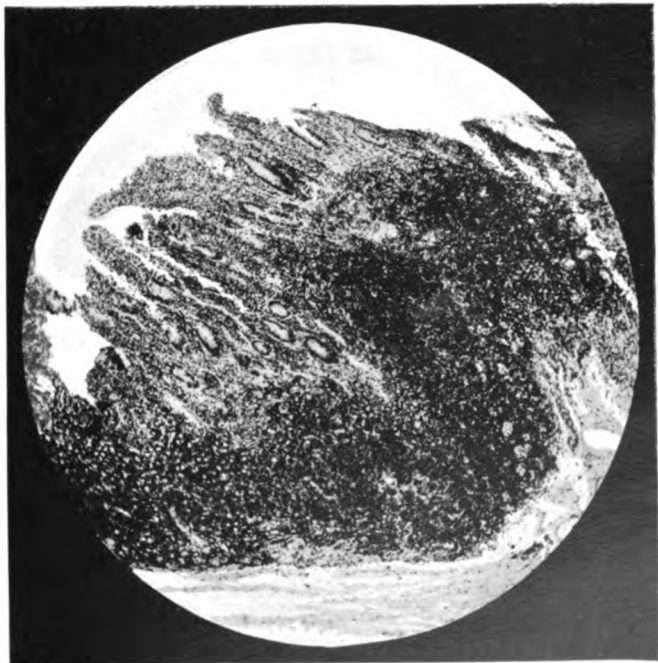


FIG. 8.—Ileum. Peyer's patch. To show great increase of small round-cells. $\times 50$.

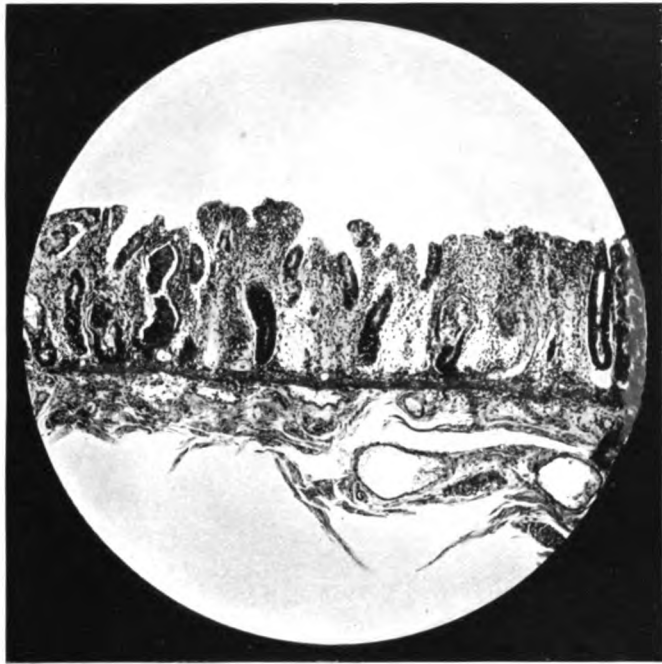


FIG. 9.—Ascending colon. Note the disappearance of the glands, and marked cellular invasion. $\times 50$.

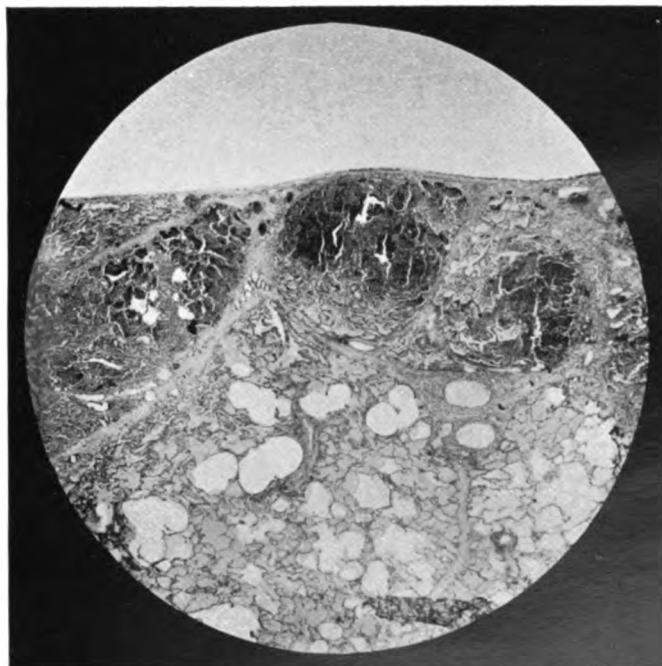


FIG. 10.—Lung. Note underneath the pleura the areas of small-cell infiltration described in the text; also the dense bands of fibrous tissue at their periphery. $\times 20$.

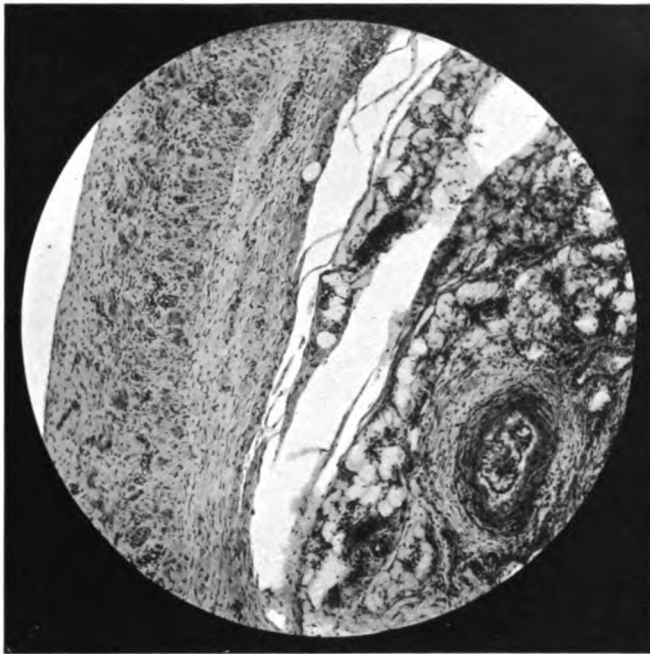


FIG. 11.—Mucous and submucous coats of the bladder (Miss Seventeen). Note that the mucous membrane is represented by a thick layer of organising granulation tissue; the submucous connective tissue is much increased. Note the large vessel with much thickened wall. ($\times 50$.)



FIG. 12.—Outer part of bladder wall (Miss Seventeen). Illustration shows (a) great increase of connective tissue in the subserous coat; (b) marked hypertrophy of the muscle-fibres, groups of which are surrounded by (c) dense bands of fully formed fibrous tissue. ($\times 50$.)

fibroid polypus, the nature of the existing lesions admits of a general description. The lesions in the alimentary, respiratory, and urinary tracts were those of more or less destruction and disappearance of the proper tissue elements of the organs involved, their place being taken by large numbers of leucocytes, small round connective-tissue cells, and fully formed fibrous tissue, the general appearances being characteristic of local reactions to bacterial infection. Fig. 10 illustrates the size and position of these foci in the lung. Suitable staining revealed the presence in these areas of large numbers of Fraenkel's diplococci. The fibroid changes around these areas clearly indicated the long-standing nature of the lung lesion. (The reader will have observed that the symptoms of mental derangement only appeared four and a half months before death.) The lesions in the bronchi were those of acute and chronic congestion. While these must not be ignored, we do not lay special stress on them, as their naked-eye and histological features indicated that they were largely of the nature of a terminal change. It was otherwise with the lesions in the gastro-intestinal tract. The changes were manifestly those of chronic irritation, which we may presume to be synonymous with chronic bacterial infection. These changes may be very roughly classified into two groups—*a*, an atrophic; *b*, a hypertrophic. An extreme illustration of the former is seen in Fig. 2, which represents a complete section of the stomach wall, and in Fig. 7, a section of the lower end of the ileum. Figs. 3, 4, and 5 are less advanced illustrations of the same morbid process in the cardiac, middle, and pyloric end of the stomach respectively. The hypertrophic phase, which is probably an earlier stage of the process, is depicted in Fig. 8. While this cellular infiltration is most marked in and around Peyer's patches, it is by no means confined to these areas. The marked degree of thickening of the submucous coat and the fibrous state of the villi showed that the pathological process was of long duration. The lesion in the bladder in the case of Miss Seventeen was an extensive small-cell infiltration of the mucous and submucous coats, with atrophy of the mucous membrane and great overgrowth of fibrous tissue through the hypertrophied muscular coat. The lesions illustrated were obviously of long standing. The changes in the bone-marrow and spleen were characteristic of the reaction of these organs to a

general systemic infection. We believe that the changes in the former tissue are specially worthy of careful study.

3. *The advisability of further observations on the pathology of acute insanity being conducted along the lines indicated.*—It is not our intention to form any conclusion from this record *re* the etiology of acute insanity. What we desire to emphasise is that a study of the history and clinical features of these cases, in the light of the *post-mortem* evidence, suggests the necessity of further observations on the pathology of acute insanity being conducted along the lines indicated in this paper. The investigations must be of a general nature and reasonably complete. All possible sources of malnutrition of the nervous system must be investigated, and special attention must be devoted to a study of the natural means of defence in the organism, and to the manner in which these react to bacterial and other untoward influences. Temperature alterations, whether of a febrile or subnormal character, should be studied. Information as to the total quantity of urine passed *per diem*, and the character of the alvine discharges, if obtainable, will be of the utmost service. Additional information of great value will be gained by a frequent examination of the blood as already carried out by Lewis Bruce. Careful regard must also be had to the individual variations in the powers of resistance, a study of which is essential to an explanation of the phenomena of disease.

These remarks are not to be taken as minimising the importance of a study of the hereditary factor in disease of the brain. This must ever occupy a paramount place, and we wish to clearly indicate that the lines of investigation to which we refer are supplementary to that study and in no sense antagonistic to it. In conclusion we would summarise the situations of lesions the existence of which, in our opinion, is worthy of a closer study.

a. *The oro-gastro-intestinal mucous membrane.*—The foregoing records show that clinical features may be slight or absent, and yet a condition have existed capable of profoundly interfering with the nutrition of the brain. The recent researches of Lorraine Smith⁽¹⁾ and Tennant on the presence of bacteria in the alimentary tract of animals in health and disease are of great interest in this connection.

b. *The respiratory tract.*—The examination must include the whole respiratory mucous membrane, including the naso-

pharynx. The importance of deafness in some cases of insanity is recognised; this deafness, in our opinion, is in the great majority of cases dependent on a very chronic infection from the nose and naso-pharynx. Hence the importance of studying the complete clinical picture of disease as it exists outside the nervous system.

c. The utero-vaginal mucous membrane.—This does not call for elaboration. We need only cite cases of so-called puerperal insanity as indicating the importance of this site in some cases of acute disease; it is possible that it may be important in some cases of chronic malnutrition of the nervous system.

d. The urinary tract, as in the case of Miss Seventeen described.

e. The skin.—It will suffice to refer to the mental symptoms met with in some cases of erysipelas, and further remind the reader of the diagnosis of the case of Miss Sixteen as one of mania following erysipelas, as indicating the importance of a study of the skin.

While attention should be directed to these situations as the main sources of chronic infection, it is equally essential to investigate the manner of reaction of the tissues to such chronic change. This involves the detailed study of the blood, temperature, pulse, and other changes during life; and later, if opportunity arises, a careful investigation of the bone-marrow and other leucocyte-forming tissues.⁽¹⁾

In conclusion we may be allowed to indicate that we are aware that structural changes similar to those described may, and sometimes do, exist to some extent in subjects unaffected by acute mental derangement. But the recognition of this fact in no way minimises the probable importance of these lesions as sources of malnutrition of the brain in the cases involved. It rather emphasises the great importance of the closer study of the *individual factor in disease*, and leads to a clear appreciation of the fact that, with the possible exception of a small number of diseases of a specific nature, no two subjects react alike to the same pathological conditions.

(¹) "On the Growth of Bacteria in the Intestine," *Brit. Med. Journ.*, December 27th, 1902.—(²) "The Reactions of the Bone-marrow and other Leucocyte-forming Tissues in Infections," *Trans. Path. Soc. of London*, vol. liii, 1902.

Malignant Œdema in a Case of Melancholia; rapid fatal termination. By R. D. HOTCHKIS, M.D., Assistant Physician, Glasgow Royal Asylum.

THE following case is thought worthy of publication, not because there is anything unique in its history and progress, but because it illustrates the low vitality to which a melancholic patient can be reduced, and the consequent easy prey he falls to any acute infective process. More than usual interest is now attached to these cases, because of the prevalent views of the toxic origin of insanity; and the influence which different poisons exert on one another demands careful study.

A. M. S—, æt. 59, single, a commission merchant, was admitted into the Glasgow Royal Asylum on April 5th, 1902.

Past history.—He had a previous attack about twenty years ago, evidently slight, from which he recovered. Otherwise he has been healthy. There is no known hereditary predisposition.

Present illness.—For at least a year he has suffered from digestive troubles which impaired his health, and he also had some business worries. Mental depression came on about nine months ago. Treatment chiefly for his dyspepsia was tried in a "Home," but he got worse, refused his food, which so reduced him that he had to be removed to an asylum.

Present condition.—He is thin, spare, and emaciated, with hollow, gaunt features, which are rendered more striking by his sad and melancholic expression. No organic disease can be made out except that his arteries are slightly thicker than normal, and his urine contains a faint trace of albumen.

His mental condition is one of deep depression; his thoughts centre entirely on himself, and his chief delusion is that his stomach is organically diseased. On subjects not connected with himself he talks rationally, and his memory seems good.

Treatment and progress.—He was at first kept in bed and was spoon-fed every few hours, a proceeding which he resisted, but which ensured him getting abundant nourishment. Paraldehyde was occasionally given at night, and acted fairly well.

A distinct improvement soon set in, and continued uninterrupted till he was discharged recovered on July 4th. He got comparatively stout and cheerful, and the last mental symptom to disappear was the delusion that poison was put into his food.

A few weeks after leaving here he relapsed, and continued more or less depressed till his readmission as a voluntary patient on February 17th of this year.

His bodily condition is considerably reduced and is practically the same as on his former admission, with the exception that his urine contains more albumen. Mentally he is much depressed, and has the same hypochondriacal delusions about himself.

February 27th.—His condition during the ten days since admission has varied much ; sometimes for one day he will be acutely depressed, when he refuses to speak, will not keep his clothes on or take his food, but rolls about on the floor with his face between his hands and groaning audibly. The next day he will be calm, though still depressed, talking rationally, apologetic for his behaviour the day before, and much distressed on account of it, and yet affirming, with evident sincerity, that he could not help it. He had to be fed once with the stomach-tube. Paraldehyde is given at night with good results, which he himself acknowledges.

March 3rd.—Yesterday about one o'clock he fell through slipping on the polished floor, and sustained a superficial cut about half an inch in length over the right eyebrow, which was immediately washed with carbolic acid 1 in 40. This morning, in addition to ecchymosis, there is more swelling than would be expected, and the wound looks unhealthy. He will keep no dressing on it, but does not complain of pain or uneasiness. There are some signs of prostration, his pulse being feeble and his extremities somewhat cold.

4th.—Since yesterday the swelling about the wound has steadily increased, and now his whole face is enormously swollen, the scalp and neck also being involved. There is some sloughing of the epidermis over the right upper eyelid, due to its vitality being impaired by the ecchymosis, but in other places the skin is of a darkish brown tint, and there is no hardness or marked tenseness. The parts pit on pressure, and some serum oozes from the wound. There is some frothy expectoration and slight increase in respiration, showing involvement of the respiratory tract.

His general condition is one of great prostration—rapid pulse which at times can hardly be felt, cold extremities, and subnormal temperature. With a view to ascertain whether incisions would afford relief, Sir Hector Cameron was consulted, but he did not advise any operative measures. The treatment adopted was free stimulation, but the prostration increased, and he died the same evening.

Although the mental depression never left him, he remained conscious and clear in mind up till the end, *e.g.*, recognised and conversed with his relations, inquired after his friends, and showed no loss of memory or mental weakness.

The death was notified to the Procurator-Fiscal, and by his order the *post-mortem* was done by Prof. Glaister.

The face was much discoloured, and the œdema involved not only the face and scalp, but the whole of the neck and the pharynx and larynx. The glottis was still patent. The skull-cap was somewhat thickened. The pia arachnoid was thickened, chiefly over the parietal region, and had some milky patches, but it was not adherent to the convolutions. The cerebro-spinal fluid was much increased and filled the ventricles, and the brain substance itself was œdematous. The basal arteries were atheromatous. Both lungs were œdematous ; the heart normal, but there was some atheroma of the aorta. The capsules of both kidneys were slightly adherent, but otherwise the kidneys were normal, as were also the other abdominal organs.

Remarks.—The above case showed the ordinary symptoms of melancholia, with delusions referred chiefly to the digestive organs. While in a reduced bodily state the patient is attacked through a slight accident by an acute infective poison, and succumbs without apparent resistance.

As regards the name of this acute infective disease, the clinical symptoms point to one of the varieties of erysipelas, *viz.*, œdematous erysipelas or malignant œdema, this latter term being especially apposite. There are some unusual features in the clinical symptoms, one being the rapid course of the disease—fifty-five hours only from the production of the wound to the end; and of this some twelve hours might be allowed for the period of incubation, as no swelling or untoward sign was noticed till after the lapse of that time. It might be urged that death was due to asphyxia, but, though œdema of the glottis ensued, it was only partial, as was shown clinically and also at the *post-mortem*.

In all forms of erysipelas a rise of temperature is almost always present, but in this case the temperature was subnormal throughout, and the symptoms of collapse were among the first to appear. One explanation might be that the dose of the poison was so great, and the organism so feeble and non-resistive, that collapse ensued before the temperature had time to rise. All text-books describe a high temperature with rapid onset as one of the chief symptoms, but experience has shown that in acute diseases in the insane most symptoms may be modified.

The œdema, which was extensive, not only caused the soft parts to be enormously swollen, but involved the brain and its surroundings. Much has been written on the subject of intracranial pressure. According to one view the effusion produces clinical symptoms of brain-pressure; the theory opposed to that being that the brain is compressible, and therefore no pathological pressure can be exerted by the cerebro-spinal fluid, which fluid can escape easily and readily from the cranial cavity. The present case supports the latter view, for, although the cerebral œdema was extreme, there were no clinical symptoms of pressure, the patient's mind being clear, except for the depression, up till at least ten minutes before his death. He recognised his relatives, was conscious of his surroundings, nor did he show or feel any drowsiness; and he expressed the

wish that his usual sleeping draught (paraldehyde) would be given him that night. Had any pressure at all been exerted on the nerve-cells there would have been some symptoms, however slight; but none could be detected.

Notes on Three Cases of Insanity Toxic in Origin. By
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CASE 2552.—A married female, æt. 32, was admitted June 18th, 1902, suffering from acute exotoxic mania of three weeks' duration.

Family history.—Her parents were first cousins. She was the seventh of a family of nine, the other members being healthy. Her maternal uncle at one time had had an evanescent attack of depression after some love disappointment; a cousin was insane. She had two healthy children; she had a miscarriage in 1901.

History of case.—In May, 1902, she had removed to a dirty house, where there had been a case of typhoid. She personally undertook the cleaning of the house, and shortly afterwards contracted pains in her joints, with raised temperature, and an intensely itching erythema. She was treated symptomatically. In a week or so her mental condition showed unsatisfactory signs; at night she would weep without apparent reason, and was unreasonably suspicious of her relatives. Three weeks after the occurrence of the physical symptoms she became acutely maniacal, and, after a futile attempt to manage her at home, she was brought to the asylum. On admission she was acutely excited and subject to hallucinations of sight, hearing, and touch,—“beasts” were running over her skin, and these she vainly tried to catch with her fingers, uttering expressions of horror all the time; she heard voices, and heard and saw “water rushing down the walls.” She also declared that she saw soldiers marching about her room, but that they disappeared on her approaching them. She was very irritable during convalescence, and her fleeting delusions returned in the evenings for some weeks. Her physical condition was unsatisfactory: temperature 99·4°; pulse 108; tongue dry and brown. Her pupils were dilated, and reacted sluggishly to light. Urine scanty, with a trace of sugar. On her scalp was a diffuse eruption of sebaceous cysts, which were very hard and immobile, about the size of a pea, and numbered thirty in all; they had developed during the few days prior to admission. At first there was some doubt regarding their nature, but this was demonstrated, and at the same time a new mode of treatment was suggested, by the patient rubbing down with her finger one of the cysts on her forehead, bursting the sac, and diffusing its contents into the surrounding tissue. She was treated by rest in bed, various mild hypnotics and tonics, with

stimulants. Wet packs gave satisfactory results during the high excitement.

Her recovery was, save for a slight relapse, uneventful. She was discharged after three months' residence, and soon recovered in home care.

CASE 2554.—An unmarried female, æt. 67, was admitted July 5th, 1902, suffering from acute, excited, abstinent, autotoxic melancholia.

Family history.—Father died paralysed; mother died of phthisis. She was the eldest of a family of ten; one sister was hysterical, the others healthy. A maternal uncle and aunt died of apoplexy. No insanity was known in three generations.

Personal history.—About six years before admission she suffered from myxœdema, but this had disappeared under treatment. She had been a clever, accomplished woman, but had no great staying power for work, and was at times, when displeased, petulant and hysterical.

History of case.—Twenty-five days before admission she had in public, without any apparent cause, a violent hysterical fit, this being the first sign of her mental breakdown. There followed upon this a gradually deepening depression, accompanied by loss of appetite and general *malaise*. She went to her sister's house a week later, and was then very constipated, the usual remedies failing to act. Some days later she began to refuse food, and was brought to the asylum.

On admission she was depressed and had visceral delusions,—said that she had no stomach, and that she was the greatest of criminals. Her physical condition was unsatisfactory, but no definite lesion could be made out. She refused food. During the next few days her bowels were moved by a dose of calomel followed by castor oil. Forcible feeding was found necessary. She remained very constipated, and was seen by the family physician in consultation, but no gross abdominal trouble could be discovered. For a short time there was a hard tumour showing just above the pubes, but it disappeared as rapidly as it became evident. It was not an enlarged bladder, but rather pointed to rapid malignant growth. Her bowels were moved by means of enemata, and a large quantity of *fæces*, containing hard scybalous masses, was evacuated. Diarrhœa then began, and for some days she passed, *per rectum*, small quantities of blood of a bright red colour. Her abdomen became tympanitic, and a slight fulness could be made out in the left flank. She was again seen in consultation, but her condition was too low to admit of surgical interference. She died a month after admission.

Necropsy.—Left leg markedly œdematous, and the left inguinal glands slightly enlarged. The abdomen was swollen and tympanitic. The small intestine was dilated throughout its entire length; the large intestine was unequally distended, the ascending colon, hepatic flexure, and descending colon being dilated; while just below the dilated portion the bowel was of normal calibre and contained hard scybalous masses, which, on removing the bowel and flushing it with water, were found to almost entirely occlude the lumen of the canal. There was extreme congestion of the mucous membrane in the position of the scybalous masses referred to. The walls of the intestine were thickened and catarrhal. A detailed examination of the intestines was made by Dr. Ford Robertson, who reported evidence of severe chronic catarrhal

changes in the mucous membrane of the stomach and intestines, there being much thinning of the mucous membrane, thickening of the sub-mucosa, and fibroid changes in the muscular tissues, these all pointing to a local irritation of long standing.

CASE 2259.—An unmarried female, æt. 58, admitted August 11th, 1902, suffering from acute excited autotoxic melancholia.

Family history.—She was the second of a family of three; her two brothers were alive and well. A paternal uncle was alcoholic, but lived to old age. No insanity was known in three generations of the family.

Personal history.—She had had an attack of herpes zoster eighteen months before admission, but had suffered from no other noteworthy disease. She had been an industrious woman, of a cheerful disposition.

History of case.—Her illness had been of seven weeks' duration, and had begun with "stomach trouble," loss of flesh, and constipation. Occasionally she had frightful dreams, but was mostly sleepless. She worried herself unduly about trifles, and gradually depression followed, accompanied by delusions of unworthiness and poverty.

On admission she was acutely melancholic. Her bodily condition was bad; her urine contained a large amount of pus and some hyaline casts, and was acid in reaction. A thorough examination of her abdomen was impossible owing to her resistive condition, while she herself would furnish no clue to her subjective symptoms. During her residence she continued excited and depressed; she became abstinent and had to be fed forcibly. Her urine did not improve under medicinal (urotropic, etc.) treatment and surgical applications, and she was examined by Dr. R. Stirling under an anæsthetic. The mucous membrane of the bladder was found to be thickened and rugose. It contained no calculus; urine scanty, highly phosphatic, alkaline, with pus and blood. A diagnosis of probable malignant disease of the bladder, with possible implication of the kidney, was made. Irrigation of the bladder, continued for some time, had the effect of rendering the urine less offensive, but her general condition did not improve. She died four months after admission.

Necropsy.—Several minute calculi were found in the bladder; the mucous membrane of the bladder was much thickened. A phosphatic calculus was found in the pelvis of the left kidney, almost entirely blocking the left ureter. Dr. Ford Robertson reported as follows:—"The kidney was found to contain several minute cysts and one fairly large one, about one third of an inch across, multilocular, situated in the cortex, and filled with a thick red fluid. Microscopic examination shows that the kidney is cirrhotic. The large cyst appears to be a retention cyst. There are numerous emboli of micrococci throughout the kidney. The vessels show numerous emboli composed of micrococci."

Remarks.—These cases each possess interesting individual features, while collectively they deserve notice because of the very evident toxic element in their etiology. Case 2552 shows

a remarkable connection between the sensory hallucinations and the cutaneous disturbances, and well illustrates the necessity of the integrity of the three essential factors for normal mental action,⁽¹⁾ namely, normal cortical neurons, suitable nutritional conditions, and normal sensory impulses. Here the last two factors were disordered; the nutritional basis, for the time altered, so disordered the cortical neurons as to cause them to interpret the disordered sensory stimuli received from the skin, not as feelings of discomfort or pain, but as feelings relating to the various hallucinations. The spontaneous disappearance of the sebaceous cysts is also remarkable, while the patient's treatment of them, though radical, is certainly suggestive.

Case 2554 illustrates a common variety of intestinal auto-intoxication. Unfortunately no definite information regarding the usual state of the patient's bowels, prior to her mental attack, was available; but in view of the pathological report the inference is sufficiently clear that a catarrh of the intestines had existed some time before the occurrence of the mental symptoms, and that this catarrh was in all probability causative.

Case 2559 similarly is of toxic origin, the toxicity arising in this case from the suppuration resulting from a renal calculus, and along with Case 2554 well illustrates the difficulty of abdominal diagnosis in the insane.

Collectively, these cases are interesting because of their toxic origin, and as illustrating the occurrence of physical symptoms prior to mental symptoms.

On examining the admission schedules of these patients I find that the "supposed cause" in the first and third cases is so obscure as to warrant a candid admission of "unknown," while in the other case it is stated as "senility." It is to be regretted that, too often, reliance is placed upon this kind of statement on the statutory schedule, filled up, as it usually is, in carelessness or ignorance, where usually a prominent symptom, such as alcoholism, is noted as causative, and too often the physiological element is overlooked because of the prominence of the psychological.

The report of these cases is partly inspired by a remark in the JOURNAL for April of the current year anent the recording of cases; one thing is certain, that the case-books of asylums

contain much valuable information which, if collected and tabulated, would go far to place the study of the etiology of insanity on a sounder basis and free it from a great deal of superstition and mysticism.

(1) Dr. Ford Robertson, *British Medical Journal*, October 26th, 1901.

A Case of Cerebral Tumour complicated with Alcoholic Confusional Insanity. By H. E. RIDWOOD, M.B.Lond., M.R.C.S., Assistant Medical Officer, Claybury Asylum. With remarks by Dr. ROBERT JONES, M.D., M.R.C.P.Lond., Medical Superintendent.

THE patient, A. H. D—, æt. 38, was admitted to Claybury Asylum on April 11th, 1903.

The only important points in her family history were that her grandfather died in an asylum, and that an uncle died "out of his mind."

The following is her previous history :—She was never insane before the present attack; she had scarlet fever at sixteen years, and diphtheria at twenty-four. She never had rheumatic fever, chorea, gout, influenza, nor fits of any kind. There is no statement as to venereal disease. By her first husband she had one child that died; she then became a Salvation Army nurse. She married again, and had one child that lived a year and died of convulsions; then she had a series of six miscarriages.

Two years ago her sleep first became fitful; since then she has been continually leaving home for weeks at a time and sleeping in the open in sheds and outhouses. In disposition she was "sometimes cheerful, at others spiteful." Latterly she contracted habits of intemperance in drink, and would take nothing but gin from morning till night. She would have it at any cost, while she became more and more restless and sleepless.

She was admitted in a wasted and feeble condition; her height was 5 feet 5½ inches, and weight 6 st. 12½ lbs. She could not walk without help, and could hardly stand alone.

Physical examination revealed nothing abnormal in the heart's action save that it was slow; the heart-sounds were clear, the apex-beat was not displaced, and there were no signs of cardiac dilatation. There

was a pulse of 50, which was small, regular, and of fair tension. Over the apex of the right lung there was deficient resonance to percussion and diminished vesicular murmur on auscultation, without any adventitious sounds; otherwise the lungs appeared healthy. No abnormality was detected in any of the viscera. The urine had a specific gravity of 1020, was acid, contained no albumen or sugar. Deposit of mucus and phosphates present. No malformations were present, but the palate was high and narrow. There was general muscular enfeeblement, with wasting, but without any local limb paralysis. The grip was a little stronger in the right hand than the left, while she could not feed herself properly from sheer loss of power. There was marked paresis of the facial muscles on the right side. The orbicularis palpebrarum was affected with the rest, since the closed eye was readily opened with the finger. There was also paresis of the levator palpebræ superioris, producing marked ptosis of the right eyelid, through the thin lax texture of which the cornea, when totally covered, could be seen pointing in an upward and outward direction. The expression was more or less vacant owing to the drooping of the right eyelid and flattening of the natural lines of the same side of the face, while her downcast eyes were only occasionally raised, with apparent effort, when she spoke. When she voluntarily raised her lids to look at any object, the eyes converged naturally, and she counted the fingers and distant objects correctly, and said she never saw double. No paralysis of any of the muscles of the eyeball was detected, and no nystagmus was present. The right eye seemed more prominent than the left, but this, I believe, was more virtual than real proptosis. The tongue was protruded tremulously in the middle line, and there was some tremor of both sides of the lips. Mastication and swallowing were performed satisfactorily. There was no tenderness of the calf muscles. Co-ordination, as tested by touching the nose or finger with the eyes shut, was poor, but could be accounted for to a large extent by lack of attention and muscular weakness. No error of cutaneous or muscle sensibility was detected on any part of the body. Sight was impaired, especially in a dim light. No other affection of the special senses was discovered. The knee-jerks were both equally exaggerated. Ankle-clonus and the plantar reflex were neither of them present on either side. The other cutaneous and organic reflexes were apparently healthy, and there was no affection of the sphincters. The right pupil was dilated to about three quarters of the full dilation, while the left was only about half the diameter of the right. Both reacted sluggishly to light, and rather better to accommodation. The outline was regular in both eyes. Speech was slow, but without any slurring or elision of syllables.

On admission she was restless, continuously moving about in bed, and talking to imaginary people. When interrogated she rambled, stopping abruptly in the middle of one topic to start another. She had no idea of where she was, but thought she was at home, and recognised the people around as her friends. She could give no coherent account of her recent life, stating, however, that she had not been able to sleep for the last month, and had been taking drugs and sometimes spirits to procure sleep. She also owned that she had been frequently intoxicated. Her memory for remote events was equally defective; she

could not be sure how many children she had had. She had auditory and visual hallucinations; she pointed to a part of her bed, where she saw her child sitting, she said, and used to hold conversation with her. She said she had various articles in bed with her, which she tried to produce unsuccessfully.

A fortnight later, on April 24th, she was still in the same state of extreme mental confusion. Every morning, although she had not left her bed, she described how she had been out on some journey, errand, or excursion. One morning she described how, after getting her husband's breakfast, she went for a walk "under the water" on the river bed down to the stony sea bottom, where she found her husband's yacht of fifty tons, which she promptly manned, and sailed to France accompanied only by her child.

On three separate mornings she described under-water journeys in which she felt the pressure and motion of the water about her. More often she said she went for a walk or went shopping. She could not even remember then whether she had had her dinner or not. Frequently one saw her waving her hand about in her endeavour to arrange imaginary objects which she could not catch hold of, such as trying to put a fictitious dish-cover on a plate. The only physical change was that the ptosis was more marked and the patient more feeble.

No satisfactory examination of the optic papillæ could be made owing to a steaminess of the cornea with a breach of epithelium in the centre. Vessels could be seen which, if traced along, led to no disc that could be recognised as such, owing to the reflection. There was no white reflex to be got anywhere, however, which a normal disc would certainly give, so that, on the whole, the presence of papillitis was highly probable. The pulse was now 80, fair tension.

By May 1st the patient was unable to hold her head up, and complained of pain in the back of the neck. If she sat up in bed the head fell right backwards nearly between the shoulder-blades. There was no loss of power in the extensor muscles of the neck, since the head never fell forwards even if bent forwards. The pupils were about the same size as before, but were now quite fixed. She became much slower in replying to questions, and would hardly speak at all, appearing quite dazed.

May 8th.—There was more loss of power of the flexors of the neck, without much extensor weakness; the general feebleness was increasing, and the patient more stuporose. The knee-jerks were still exaggerated.

15th.—She rapidly became unconscious, with stertorous breathing; corneal reflex just present, to be lost later on, and the knee-jerks obtained with difficulty. The pulse stroke was good, the tension fair, and the rate 65. The coma gradually increased, and the left pupil became much smaller, almost pin-point, while the right remained about the same size as before. She died in coma on May 18th.

There was never any vomiting, headache, or fits throughout the whole course. The temperature varied from 97° to 98° till May 17th, when during the coma the temperature remained at 100°. The pulse remained about the normal rate, though slow on admission, slowing down again during the coma.

The autopsy revealed a tumour arising by a peduncle from the right side of the sella turcica, apparently from the dura mater, and invading the temporo-sphenoidal lobe of the brain. When the brain was removed it appeared in the angle between the basal surface of the temporal lobe, the pons Varolii, and the crista, pressing on the two latter and deflecting the third nerve. The right temporal lobe looked larger than the left, and the tumour seemed to grow deeply into its interior. The surface of the vault showed close packing of the convolutions, with flattening of their usually rounded margins, due to the increased intra-cranial pressure. There was no cerebro-spinal fluid seen above the tentorium, but some was present beneath it. The optic nerves on section were redder than normal, so that optic neuritis was present. The nature of the tumour is probably sarcomatous. The brain is being hardened for examination and description.

Remarks by Dr. Robert Jones.—This case shows the difficulties which encompass the diagnosis of cerebral tumour. Firstly, there was neither headache nor convulsions, and some doubt existed as to optic neuritis. Mentally the patient presented the symptoms characteristic of alcoholic dementia—the *paramnesia* so frequently noticed in these cases, when the patients make imaginary journeys, are forgetful of their surroundings, and endeavour to fit the past into the present. In the case under review the patient called the nurses and others around her by names she thought she knew them by before admission. There was a definite history of drink, extending over two or three years, and the symptoms of the latter possibly obscured those caused by the intra-cranial growth, which, except for pressure on the nerves of the right eye and right side of the face, were probably more functional than local, and caused by intra-cranial pressure. It has often been asked if there are any constant psychic symptoms common to all cerebral tumours. The answer to this must be in the negative, as the symptoms depend upon the localisation of the growth, and whether it be intra-cranial or cortical; also upon its size, its nature, and the rapidity of its growth. Observers who have recorded a number of cases of cerebral tumour (and a valuable summary of these has lately been compiled by Vigouroux) state that mental or intellectual troubles are noted in about one half of all cases, delirium in about one out of twelve, and insanity very rarely. In the clinical experience of this asylum (excluding hæmorrhages, softenings, cysts, aneurysms, etc.) there are records of about twenty-four cases of cerebral tumour in over 9000 admissions, about 3 *per cent.* in each of

the sexes, a little more in males and a little less in females. These cases cannot be said to have had any one special mental symptom, or set of symptoms, unless a dull, heavy somnolence was characteristic of them. It has been stated by some that the growths encroaching upon the frontal lobes are accompanied by marked psychic symptoms—that a special form of “reasoning insanity” is associated with neoplasms of this region; but others consider the frontal lobes to be “tolerant and silent” in regard to symptoms.

Brault and Loeper insist upon dementia as a symptom, and they describe a psycho-paralytic form of cerebral tumour where psychic troubles predominate and appear first. The dementia has been described as a slowness of ideas, a laziness, a cloudy state of mind with diminished power of attention, loss of power in regard to intellectual effort and concentration, and a slow response—the patient often falling into a veritable stupor immediately after replying. Brissaud has especially referred to this stupor, stating that the patient does not speak or answer, does not leave his bed or chair, does not eat; his habits are defective, and only when his name is loudly called does he emerge from his lethargy—and relapses again. The loss of memory has been especially noted, proper names being the first to go; recent facts are not remembered; but conduct, he states, remains normal and without disorder.

In cases admitted into asylums actions are necessarily disordered, and mentally there is a marked quantitative difference in the intellectual faculties; the dementia is often total, and there is complete indifference to surroundings, and in these cases the patients are not conscious of their situation, have no reflective life, no ideas, and they are unable to speak or act for themselves.

Ball described “irritability” as a special feature of cerebral tumour, and that this feature enabled a diagnosis to be made between cerebral tumour and cerebral softening. In the latter dementia appeared with tears and laughter rather than in the changed character and irritability of tumours.

Dupré and Devaux described a psycho-puerilism as of much diagnostic importance, there being an infantile intonation and an impatient, if not an obstinate indifference. Brissaud, as already referred to, states as his experience that the intellect goes and memory goes, but character is unaltered, and that

there is a simple return to childhood without the vivacity and curiosity of the latter. Some have described impulses as characteristic of cerebral tumours, also an "ambulatory automatism." In cases admitted into asylums, as stated, there is more or less complete dementia, but may be neither sickness nor headache, at times no convulsions, and but little assistance can be obtained from the patient. When Broca's area is affected there may be the same speech difficulties as in general paralysis, and cases are not infrequently diagnosed as general paralysis of the insane, especially when, in the course of the disease, the convulsive seizures are general and the dementia profound. Cerebral tumours have to be distinguished from senile dementia, softening, epilepsy, neurasthenia, lead poisoning, and uræmia, as in these the mental and physical symptoms are not dissimilar. To sum up, in regard to troubles of the intellect, changes in the emotions and volition, there are not any of these which are characteristic of the presence of cerebral tumours, or are diagnostic of their locality.

What is the cause of the torpor? Possibly the intra-cranial pressure; for the torpor is relieved by surgical operations, such as trepanning or lumbar puncture. This probably accounts for the relief of symptoms in some cases of general paralysis. Possibly toxic causes give rise to the convulsive symptoms, as also to the delusions and torpor referred to, the toxins being caused by dissociation of nerve elements surrounding the tumour and during its growth, being then absorbed and causing fever, headache, delirium, and convulsions analogous to the auto-intoxication of uræmia or cholin poisoning of dementia paralytica.

An Obscure Case of Aneurysm. By ROBERT PUGH, M.D., B.Ch.Edin., Assistant Medical Officer, Claybury Asylum.

A. B—, æt. 37, married, labourer. Admitted to Claybury Asylum September 22nd, 1893, suffering from general paralysis. No family history obtained.

Certificate.—His lips are tremulous, speech slow and hesitating, and the labials are not pronounced. Says a sack of

flour fell on his shoulders from a height of fifty feet; says he was at the London Hospital this morning; thinks he is now in Bromley.

Physical condition.—Is fairly well nourished, has well-marked signs of syphilis. Frænum absent. Scar to left and below the orifice of the urethra. Inguinal glands “shotty.” Tongue furred and finely tremulous. Heart and lungs healthy. Pupils unequal, left dilated, right contracted to pin-point, light reflexes absent. Knee-jerks exaggerated. Plantar reflexes very marked. Muscular movements tremulous and inco-ordinate. Gait unsteady. Speech slurred and inarticulate.

Mental condition.—He is dull and confused, power of attention much impaired, mental reaction slow, takes a long time to answer simple questions; rambling and incoherent in his remarks; memory much impaired for recent, remote, and permanent events. Does not know where he is, nor how long he has been here; has no knowledge of time.

Progress of Case.

June 21st, 1894.—He is very tremulous, demented, and paretic. He takes no interest in his surroundings, and has no knowledge of time or place. Bodily health fair.

July 10th, 1901.—He is very shaky and lost. Speech is slurred. Says he has £75,000,000. Pupils contracted; light reflexes absent. Left knee-jerk absent. Bodily health fair.

April 27th, 1903.—Mentally he is in a state of gross dementia. He is absolutely lost to his surroundings. Bodily health feeble. Muscular movements tremulous and very inco-ordinate. Pupils dilated; light reflexes absent. Knee-jerks absent. Heart's action feeble, and the sounds in all areas clear.

May 15th (at 6.30 p.m.).—Patient was sitting up in bed, coughing and labouring under dyspnoea; the cough was resonant and brassy; the dyspnoea lasted for a little time, but responded to treatment.

Next morning at 5 a.m. he died suddenly.

Autopsy.

Is poorly nourished. Has well-marked signs of syphilis. Frænum absent. Scar to left and below the orifice of the urethra. Inguinal glands shotty.

Dura mater.—Thickened, excess of subdural fluid. Pia arachnoid: much fronto-parietal opacity and thickening; strips with difficulty, especially over parietal regions. There is a considerable excess of sub-arachnoid fluid. The vessels at the base are atheromatous, and the sinuses are empty.

Encephalon.—1147 grammes; right hemisphere 483, left hemisphere 475, cerebellum and pons 160. There is much wasting, chiefly in the

pre-frontal region, which is obscured by œdema. The lateral ventricles are dilated and very granular; the fourth ventricle is also very granular.

Pupils: right, 5 mm.; left, 6 mm.

Thorax.—Right pleura is firmly adherent at apex, posterior border, and to diaphragm. The left pleura is slightly adherent at the apex and the posterior border. The bronchial glands are œdematous and fibrous. The bronchi contain blood. Right lung weighs 680 grammes; the upper lobe is somewhat congested and fibrous. Left lung weighs 570 grammes; the upper lobe is œdematous; the lower lobe is pneumonic, of a lobar type, and presents a marble appearance owing to presence of blood. The pericardium is natural. The heart is wasted; the ventricles are natural. On opening the trachea an irregular, ragged, ulcerated area the size of a shilling is seen, just at the beginning of the right bronchus. Several rings in this neighbourhood are necrosed. The trachea, larynx, and the bronchi—more especially the left—contain much recent blood-clot, which has practically flooded the lungs. The opening leads forward into an irregular, false aneurysmal sac, which lies below the arch of the aorta and passes forward, upward, and to the right. A portion of the sac projects to the right of the pulmonary artery. The original opening of the aneurysm from the aorta is immediately adjacent to and below the orifice of the left subclavian artery. The portion of the aneurysm commencing from this opening is denser and older than the remainder. The whole thing is the size of a large orange, and contains much laminated and granular blood-clot. The aorta is very dilated and atheromatous.

Abdomen.—Liver 1620 grammes, dense, fatty, small, nutmeg type. Spleen 130 grammes, pulpy. Kidneys, right 120 grammes; left 115. Capsule strips readily. Cortex 4—6 mm., density increased. Renal arteries natural. Abdominal aorta atheromatous. The stomach and intestines contain numerous blood-clots.

Cause of death.—Rupture into the trachea of an aneurysm of the aorta.

The case is one of great interest, as it showed the entire absence of the physical signs and the pressure symptoms pointing to an aneurysm. The patient had been in bed for some time, and the presence of an aneurysm was not thought of until the day before he died, when he developed the “brassy” cough and his attack of dyspnoea.

Occasional Notes.

Alcoholic Insanity.

The report of a special committee to the Glasgow Parish Lunacy Board shows that in the year ending May 15th, 1902,

no less than 259 cases of mental disorder of alcoholic origin had been admitted to the two asylums and the observation wards, one third (33 *per cent.*) of the whole admissions of the year being directly due to alcoholic excess.

This enormous amount of mental disorder does not by any means exhaust the share of alcohol in the causation of insanity. In many cases alcoholic habits, which have ceased, have given a predisposition which later in life leads to mental break-down from other exciting causes; and the children of drunkards yield a considerable contingent to our asylum admissions.

Civilisation is credited with producing an increased amount of insanity, but it is the vices accompanying civilisation that are really to blame; if alcoholic abuse and the spread of syphilis were checked, civilised communities would probably compare very favourably with the most uncivilised peoples in this respect.

This report shows that a large proportion of these alcoholic cases were earning good wages; that in fact they voluntarily reduced themselves to pauperism. This surely is an offence against society that should be duly punished, but what punishment will be effectively deterrent to an individual to whom neither pauperism nor insanity has power to appeal? Such an individual must be irresponsible, and should be dealt with accordingly.

Treatment, and not punishment, is required by those who have recovered from an attack of alcoholic insanity. The case of every such person should be medically investigated and reported on to a magistrate, who should have the power of relegating the individual to a home for inebriates for any period not exceeding three years.

Punishment should, however, be meted out to the *particeps criminis*—to those who have aided, abetted, and profited by the offence against society; and these are the proprietors of the drink-shops. It would be vain to attempt to assess the amount of criminality in any given case, and it must, therefore, be settled in the sum total arising in a given community. This would best be done by levying a special rate on the public-houses of a district to defray the expenses of the maintenance of all alcoholic insane patients in the asylums or inebriate homes, and of their families in the poor-houses. Such a rate would be quite justifiable in face of the enormous profits made from

drink, and the huge increase in value of any house to which a licence is granted, for which the community at present gets no return whatever.

Such special rating of public-houses would probably more than anything else tend to stimulate the proprietors to make their profits from the real needs of the people for refreshment rather than by encouraging and fostering the drink habit, which is now their most profitable way of obtaining business.

It may be argued that all cases of alcoholic insanity do not arise from drinking at public-houses, and this is true; but on the other hand the excessive drinking which their methods of business foster produces much ill-health and poverty apart from insanity, and, as we have pointed out, causes also much insanity which is not ranked as alcoholic.

If the public-houses of the country were specially rated to the extent of a third of the cost of all pauper insanity, they would still be treated with undue leniency. We trust that Glasgow, which is so forward in dealing with lunacy matters, will act as a pioneer in putting some check on the licence for evil of the licensed victuallers.

Voluntary Boarders in County and Borough Asylums.

The extension of the voluntary boarder system to the county and borough asylums has long been felt to be a necessity by all who are interested in promoting the early treatment of the insane. It is, moreover, only just that a provision of the law which is found to be good for the well-to-do classes should be extended to the poor. Dr. Ernest White has done good service in again giving prominence to this great need of the poor, in the recent discussion on the treatment of incipient insanity.

That voluntary boarding was not extended to the so-called pauper institutions in the late Lunacy Law was probably due to the fear that many paupers might prefer to be treated as *quasi-lunatics* in asylums rather than as paupers in workhouses; this would be very likely to be the case, and constitutes a valid objection. The difficulty, however, is so easily to be overcome that it should not be a bar to the adoption of such an important and valuable method of treatment.

A medical certificate to the effect that the applicant was capable of making the request for treatment, and was in need of it, countersigned by a magistrate, should be sufficient to protect the procedure from abuse.

The poor, much more than the well-to-do, suffer from the want of appropriate means of treatment in the early stages of mental ill-health preceding the stage of certifiable insanity, and are consequently much more in need of voluntary boarding.

The Parliamentary Committee of the Association, which is doing such good work in bringing to the attention of the Lord Chancellor the various legislative reforms that are so much needed, may be trusted to urge this amongst the foremost of the possible improvements in the treatment of mental disease.

The Inadequate Lunacy Commission.

Lunacy legislation in the present Parliament is again conspicuous by its absence, but before this reaches the eyes of our readers there will probably have been some discussion in the House on the insufficient number of medical men on the Lunacy Commission.

The proofs of this insufficiency are so well known to the members of this specialty, and have been so often urged, that no repetition of them is needed here; but interest must be felt in regard to the effect on the House of Commons of a statement of the facts of the case.

The Parliament that hears with comparative indifference of the destruction of £150,000 worth of tinned food, and of the distribution amongst the population of fifteen thousand blankets (possibly infectious), is not likely to be greatly perturbed by being informed that the welfare of a hundred thousand insane patients is being neglected.

A cynic would say that the insane have no votes and consequently cannot expect consideration, but the truth probably lies in the fact that Parliament is more interested in things which concern party rather than the State. National health is as yet a question that is not within the range of practical politics, and lunacy matters must, therefore, for the present, remain in their condition of muddle.

Superannuation Allowances in Scottish District and Parochial Asylums.

That officers and servants of the Scottish district and parochial asylums should be utterly shut out from all superannuation allowances is an almost incredible anomaly. Public servants throughout Great Britain are generally provided for in this way, and very few of them can claim it on the ground of having duties that are in any respect so anxious, responsible, or dangerous. Asylum workers should be the first and not the last to be thus provided for.

The discussion on this subject at the Glasgow Divisional Meeting in March, and the memorial addressed to Lord Balfour by the Parliamentary Committee, will, we hope, draw the attention of the responsible authorities to this glaring injustice.

The injustice to the asylum workers, however great, is probably the least of the evil, for the inmates of these asylums must suffer indirectly from the difficulty of obtaining and retaining a satisfactory staff. This has been frequently pointed out in the annual reports of the Scottish Commissioners, but hitherto without the result of even a Parliamentary proposition.

Legislation, it is well to remember, is not carried either by justice or necessity, but by the numbers, noise, and persistence of the advocates. We are not numerous, are not hysterical enough to yell effectively, and so must rely on patient persistence. The Association should never cease from its efforts in persuading the Houses of Parliament to redress this grievance.

The Department for Mental Diseases at the Albany Hospital.

The report of the first year's work of the pavilion (F) for mental diseases at the Albany Hospital is now to hand, and appears to offer every encouragement for the extension of the hospital treatment of mental diseases.

One hundred and seventy-three cases were admitted during the year, of whom 57 recovered, 53 improved, 43 did not improve, 6 died, and 14 remained at the end of the year. Of the improved and unimproved, 41 were transferred to the State Hospitals for the Insane, and of these, 20 were transferred in the first week,

and 4 between two and four months. Dr. Mosher says that the length of time patients should remain is still undetermined, and thinks that no definite rule can be established.

Dr. Mosher also remarks that the pavilion has demonstrated that mental patients of all classes may be received on voluntary request, and that only "a small minority resent the confinement and cannot be held."

Women nurses have been entrusted with the care of both men and women, an arrangement that is reported to have worked satisfactorily.

The experiment has been so successful that it is to be continued, and we urgently hope that similar additions may soon be made to British hospitals.

The Winsley Sanatorium for Consumptives.

The laying of the foundation stone of the Winsley Sanatorium for Consumptives was an opportunity for the expression, by those connected with, it of their recognition of the valuable services of a member of our Association, Dr. Lionel Weatherly.

The sanatorium is the result of a combined charitable effort of the counties of Gloucester, Wiltshire, and Somerset, and when complete is expected to supply sixty beds.

The *Western Daily Press*, in commenting on the opening ceremony, speaks of Dr. Weatherly as having been the "inspiring genius of the movement," and it is satisfactory to remember that this is said of the Chairman of the Tuberculosis Committee appointed by the Medico-Psychological Association.

A New Journal.

We have received notice from Cambridge that there is a project for starting an English journal devoted to psychology. The great increase in the number of workers in this department of science has overburdened the pages of *Mind*, and it is believed that there is now scope for a journal which will permit of the publication of important papers in regard to analytic, genetic, comparative, and experimental observations. The recent founding of new laboratories and the establishment of

the Psychological Society justify the expectation of a largely increased volume of work.

The scope of the new journal is limited to the publication of original articles and critical discussions on psychological problems. It is proposed to issue a volume of some 500 pages annually, in parts as may be found convenient, and the subscription is fixed at 15s. prepaid. The names of those who sign the prospectus are: W. McDougall, C. S. Myers, W. H. R. Rivers, A. F. Shand, and J. Ward, to whom communications should be addressed. They expect that the first part will be ready in October next, but in the meantime desire to know how many subscribers will aid in the scheme, and how many will join in a guarantee fund, which is necessary in order to induce the University Press to undertake the printing and publishing.

We trust that this new venture will command the support it deserves, especially among those whose work lies in asylums; for the investigation of normal psychology is a necessary preliminary to the elucidation of psychiatry—an inquiry too long neglected, and as yet only partially appreciated.

The Family Care of the Insane.

At the International Congress, held at Antwerp last September, the proceedings of which were reported in the last number of this JOURNAL, it was resolved that the Congress of 1904 should be held in Edinburgh. A Scottish Committee was elected, and Sir John Sibbald is now arranging to convene a preliminary meeting. It is to be hoped that it will be fully attended by representatives of the various State-supported and charitable agencies for the relief of the poor, every variety of home help, and that measures will be adopted to secure the success of the Congress, which has aroused so great an interest and formulated such important propositions.

Where shall I send my Patient?

The "Association of Medical Men receiving Resident Patients" has issued a *Guide for Medical Practitioners and a Book*

of Reference to the Health Resorts and Institutions for Patients of Great Britain. It is printed by Mr. E. J. Frampton, at Bournemouth, and sets forth the information indicated on the title-page at considerable length.

Beginning with a short *résumé* of the procedure in cases of insanity, a list of asylums is given, arranged according to the counties in which they are placed. Ireland is represented by three, and Scotland by one institution for the insane, so that the compilers' remark that the first issue is not so complete as was desired must be held as fully justified. They might consult the Medical Directory with advantage. Then comes a list of a few convalescent homes, institutions for the blind, and for the deaf and dumb. The compilers find room for a few remarks on ophthalmia neonatorum, and indicate that medical treatment is a preventative of blindness, thus guiding the medical practitioners of the country into safe ground. A list of medical men receiving resident patients, giving all particulars except the names, will be useful to those who have found it difficult to obtain such information otherwise. A number of hydropathic establishments and nursing institutions find a place in the book, and a chapter on health resorts gives a brief account of various localities from the medical point of view. Lastly, a list of selected hotels at health resorts has been inserted, which may be of service to those who possess neither Bradshaw nor Baedeker. We suggest that the hotels of the country should be left to advertise themselves, and that the space occupied by details of county asylums which can only receive the State-supported patients in their own districts, and by snippets of unnecessary medical commonplace, should be devoted to an extension of the information as to establishments where paying patients are received. The book has been well indexed, so that the contents are readily accessible.

An Australian Scandal.

The *Lancet* of last year gave details of a great wrong committed in Melbourne, a wrong whereby our respected colleague, Dr. Beattie Smith, has been grossly injured. The result is that he is no longer in the service of the State of Victoria, but after

twenty years of notable work in the asylums of that country, within a short step of reaching the highest place, he is cast adrift without pension or compensation. The political record of Victoria is debased still further by this last example of shameless misgovernment. Dr. Beattie Smith has had to give place to an assistant medical officer, who, if the allegations against him reported in the *Lancet* ⁽¹⁾ are to be trusted, was utterly unfit for the post. The "Minister" at the head of the department, however, acted in spite of the Inspector's protest. The callous indecency of the incident, as related by the Australian correspondent of the *Lancet*, passes belief, were it not that it is of a piece with what has gone before. We trust that the Council of the Association will carefully consider the whole question raised by this act of Victorian maladministration, for it not only affects one of our members, but vitally touches the interests of the insane in those important asylums at the Antipodes.

(1) See "Notes and News."

The International Medical Congress at Madrid.

The fourteenth International Medical Congress is now a thing of the past. About 7000 members attended it, exclusive of the wives and families accompanying them. For some unknown reason the Madrid authorities included in the Congress not only doctors, but dentists, veterinarians, and pharmacists as well. This was too large a number of persons for the authorities to manage, and consequently a good deal of confusion prevailed. The Spaniard is a polite, courteous gentleman, but his business capacity is decidedly wanting. Moreover, the results of that fatal word *mañana* (to-morrow) were everywhere in evidence, and arrangements which should have been made weeks before were only just concluded when the Congress opened. An account of the proceedings of the neurological section appears on another page. From it it will be seen that the Association had honours conferred on it by the election of three of its members to the position of Honorary Presidents. The difficulty of understanding what was said by the Spaniards, however, led many men to forsake the Congress

and explore Madrid, or go on excursions to the Escorial and Toledo. The reports and papers were too numerous for the time allotted to them, and only about a third of the sixty-six communications were read. On another occasion it will be better to limit their number and allow all of them to be read. Only one resolution was passed by the neurological section—a resolution calling on the Press not to report crimes, in order to avoid the contagion of crime. It is doubtful, however, whether the editors of the Press in any country will consent to omit the most sensational part of the contents of their paper; but that too much prominence is given to the life of the criminal in prison and to accounts of his life-history, in some papers, there is no doubt, and the consequence is that weak-minded individuals commit some homicidal or other criminal act.

As regards the Congress itself, it was an unwieldy affair and lacked several of the characteristics of a scientific meeting.

Part II.—Reviews.

Report on Dieting of Pauper Lunatics in Asylums and Lunatic Wards of Poorhouses in Scotland. By Dr. J. C. DUNLOP. (Supplement to the *Forty-third Annual Report of the Commissioners in Lunacy for Scotland.*) 1902. Price 5½d.

IN this supplement of their *Forty-third Annual Report* we have one more illustration of the very vital interest which is evinced by the Scottish Lunacy Board in all that concerns the real welfare of those dependent members of society who come under their cognizance. The very valuable indications afforded by the report, if acted upon, as they undoubtedly will be, can only result in rectifying very apparent anomalies of diet scales—anomalies which one is glad to find are not so much in the direction of niggardliness as in the direction of wasteful and irrational expenditure in certain kinds of diet at the expense of other and essential items of food.

Dr. Dunlop takes as a standard of an all-round dietary for pauper lunatics one that has an energy value of 3300 large calories for males, and of 2650 for females, and, judged by this, the result in the aggregate serves to show that so far as males are concerned the physiological idea which underlies common sense in the matter of food is not very far wrong, though there are numerous very anomalous departures from the standard in individual institutions.

In the thirty-nine institutions over which the inquiry extends the average energy value of the male diet works out at 3335 calories, or 35 above the standard, and this is quite in keeping with the average weight of the working male patient, which works out at $1\frac{1}{2}$ lbs. in excess of the standard. The standard for females is everywhere far in excess of that laid down, working out at 2893, or 243 above the average.

The following shows the departure from the standard average energy value of the ordinary diet, and the departure from the standard weight, in the four different classes of institutions in which pauper lunatics are accommodated :

	Energy value in calories.	Weight in lbs.
5 Royal Asylums . . .	— 28 .	+ $2\frac{3}{5}$
16 District Asylums . . .	+ 7 .	— 2
3 Parochial Asylums . . .	— 153 .	— $2\frac{1}{2}$
15 Poor-houses . . .	+ 125 .	— $\frac{1}{2}$

One is faced with apparent contradiction. In the Royal asylums the average weight of the working patient is above the standard, and yet, in general, the dietary is below the average energy value ; and on the other hand, taking the average of the fifteen poor-houses, the energy value is greatly in excess of the standard, yet the average weight fails to come up to standard. There is one point which is not dealt with specially in this report, and which has, no doubt, an important bearing on the subject of the effective value of the diet, and that is the manner of its preparation. There can be very little doubt as to the comparative quality of the cooking in Royal asylums and in poor-houses, and this may to a considerable extent serve to explain the apparent discrepancy between the energy value and average weight in these two classes of institutions.

There is another aspect of the subject which might profitably have been included in this inquiry, and which, we think, would assist in arriving at some idea of the comparative efficiency of the dietary in the various institutions, and as an indication either of parsimoniousness or extravagance in the matter of food. Due regard being had to the proportion of staff among the total boarded, the cost of provisions per patient forms an approximate guide to the value of the dietary. Of the sixteen district asylums, in which 13 *per cent.* of those boarded belong to the staff, and in which the average energy value of the male diet is 3307 calories, the cost of provisions per patient per year being £10 1s. 10d., those in which the cost is low are, as a rule, characterised by a low energy value, and by an average weight of male working patient which is below the standard. There is one, for instance, in which the staff numbers 15 *per cent.* of the total boarded, and the cost of whose provisions is £9 11s. 5d., and this is found to be associated with an energy value 323 calories below standard, and with a weight of male patient 12 lbs. below standard. In four district asylums, on the other hand, an average excess of patient's weight of $4\frac{1}{2}$ lbs. is found in association with a cost for provisions of £10 6s. 7½d., and a dietary energy value 212 calories above standard. To this general rule there are noteworthy exceptions, for which there must be some explana-

tion, and which are no doubt capable of remedy. An example of this is to be found in the case of one asylum whose cost for provisions, *viz.*, £11 13s. 7d., is the highest among district asylums, and the energy value of whose diet is the second highest, being 445 calories above standard, and yet the average working male patient's weight is found to be below standard to the extent of 4 lbs. It is not without significance that this asylum's meat bill, like that of one of its neighbours, reveals the fact that practically a quarter of the meat in the dietary is of the sort called tinned.

Such a thing as uniformity in dietary in asylums is for obvious reasons impossible and undesirable, but it may be confidently affirmed that the committees of asylums and other authorities are anxious and desirous to deal in a spirit of reasonableness with the dependent insane committed to their care. It can hardly admit of doubt that, broadly speaking, the inmates of those institutions in England and Ireland which correspond to the district asylums of Scotland are dieted in no less parsimonious fashion. The close approximation of the item in the maintenance account which comes under the heading of provisions in the three divisions of the United Kingdom affords proof of this. Still, anomalies will be found to exist, just as is displayed in this inquiry, and it is in the adjusting of such that this report will prove of inestimable practical utility. It will, of course, be of greatest value to the Scottish institutions, each of whose dietaries is criticised individually, but, making allowance for differences in the matter of local habit, the suggestions for the proper and sufficient dieting of pauper lunatics offered by Dr. Dunlop will be a very real help towards the framing of diet scales which will meet all reasonable requirements. All authorities, and their dependent charges everywhere, are under a deep debt of obligation to the Scottish Commissioners, who once more have proved by their energy that in their consideration for the well-being of the insane poor they are second to none.

Recherches Cliniques et Thérapeutiques sur l'Épilepsie, l'Hystérie, et l'Idiotie. Par BOURNEVILLE, avec la collaboration de MM. Ambard, J. Boyer, Crouzon, L. Morel, Paul-Boncour, Philippe et Oberthur. [*Clinical and Therapeutical Researches on Epilepsy, Hysteria, and Idiocy.*] By BOURNEVILLE. Vol. xxii. Paris: aux Bureaux du Progrès Médical, and Félix Alcan. Large 8vo, pp. 236; 16 plates and 14 illustrations in text.

This instructive report (for the year 1901) of the Children's Department of the Bicêtre and of the Fondation Vallée (in connection with it) gives the usual information as to the classification of inmates and their "medico-pedagogic" treatment. It would seem that of 166 pupils frequenting the senior school, 13 have been able to gain the "certificat d'études" or leaving certificate required in the case of ordinary elementary school children. Stress is rightly placed upon the improvement of speech and pronunciation—often very imperfect with imbeciles,—and no less than twenty of the teaching staff have had the advantage of training in

the methods used at the National Institution for Deaf Mutes. Much attention is given to the cultivation of music and singing, and some observations of the instructor (M. Sutter) are quoted to show that the teaching of music is not thrown away even upon those who are partially deaf, one of whom became a fair pianist, the vibrations being conducted by means of a rod from the instrument to the frontal bone of the performer ! Gymnastics and dancing are also held in high esteem. Cases of marked educational improvement are cited in detail, and Dr. Bourneville judiciously remarks that he impresses constantly on his school staff that their pupils are also *patients*, and as such require to be treated with long-suffering consideration.

The manual and industrial training of the more capable inmates continues to be carried on with much vigour, and it is claimed that the labour of the 124 working patients (including probably also that of the instructors) is worth for the year nearly 30,000 francs. The printing office would seem to be the most profitable department, bringing in 7223 francs with only eight workers; and next to that brush-making, bringing in over 5000. Dr. Bourneville contends that a larger share of the profits should be spent in improvements, and in this view we fully sympathise.

The statistics show that on the 1st of January, 1901, there were at the Bicêtre 437 male patients, and at the Fondation Vallée 213 female patients, 52 of the latter being epileptic. There were 20 deaths at the former institution and 16 at the latter during the year 1901. One case of suicide (a lad of 16) is recorded at the Bicêtre; and tuberculous disease is assigned as the cause of death in five of the twenty cases, though it probably existed in other cases returned as pulmonary disease. Two cases of general tuberculosis are amongst the assigned causes of death at Fondation Vallée, but here again there are a large number of broncho-pneumonias, etc. There does not seem to have been any prevalent epidemic at the Bicêtre, though whooping-cough and chicken-pox occurred at the Fondation Vallée; and we may remark that the death-rate appears high as compared with that now generally current in idiot institutions in this country.

Section III of the report is devoted to the advocacy of the creation of special classes in connection with the elementary schools of Paris for backward and feeble-minded children not requiring "hospitalisation." Dr. Bourneville fortifies his position by printing interesting reports of the progress of special schools established in Germany, England, Belgium, and Denmark, and again urges his views upon the educational authorities. We trust his praiseworthy insistence may lead to a speedy practical result.

In the second portion of the volume we find several well-classified schemes for use by assistants in obtaining particulars of family history and noting peculiarities and general condition of patients. We note that the morning and evening temperatures of all new admissions are taken for five days, as an aid in detecting infectious disease, actual or incubating.

Various careful studies on such subjects as the treatment of vertiginous epilepsy by bromide of camphor, moral idiocy, the osseous conditions attending infantile hemiplegia, adolescent insanity, etc., in which Dr.

Bourneville has been aided by his "internes," close a volume which fully sustains the reputation of its predecessors. It may interest some of our readers if we quote a notice which appears on the cover that M. Bourneville is at the disposal of doctors and others interested in the treatment of abnormal children, at the Bicêtre on Saturday mornings (at 9.30 *precisely*) to show them his *clinique* and demonstrate the methods of instruction in vogue.

G. E. SHUTTLEWORTH.

Ueber das Pathologische bei Nietzsche. By P. J. MÖBIUS. Wiesbaden : Bergmann, 1902. Octavo, pp. 106.

The Dawn of Day. By F. NIETZSCHE. Translated by JOHANNA VOLZ. London : Fisher Unwin, 1903. Octavo, pp. 387. Price 8s. 6d.

In one of the latest volumes of the *Grenzfragen des Nerven- und Seelen-lebens*, Dr. Möbius has written a careful study of Nietzsche from the pathological point of view, and if taken, as the author himself would wish it to be taken, in conjunction with the study of Nietzsche's works, and with the admirable biography by his sister, it may be regarded as furnishing an almost indispensable contribution to the proper understanding of Nietzsche. A writer like Nietzsche easily leads those who discuss him into extremes : on the one hand his admirers reverentially accept all his utterances without discrimination, and are most impressed by his most extravagant sayings ; on the other hand, the alienist (or, at all events, an author like Nordau, masquerading as an alienist) is tempted to go too far in the opposite direction and to find insanity everywhere. Dr. Möbius's position—though he is not always a reliable guide—is on the present occasion critical and discriminating. He is quite aware that in dealing with Nietzsche we are concerned with a very great writer and a thinker of all but the highest order ; he points out, also, that even when his work became definitely morbid it was still not without real artistic and philosophic value. But at the same time he quite definitely realises the pathological element, and in this study, by the analysis of Nietzsche's works, and also of his life,—many of the facts being here published for the first time,—he presents us with as clear a picture of Nietzsche's mental condition as we can at present hope for. It may be said at once that the biography does not bring before us the material necessary to obtain a complete picture of Nietzsche's mental state—partly, no doubt, because it is not yet complete, and partly because the writer, being at the lay point of view, has unintentionally omitted many significant facts which would have helped to make clearer an interesting and somewhat unusual case of general paralysis. Thus it would appear that the heredity is not so absolutely sound as the present reviewer, in a detailed study of Nietzsche published some years ago, had been led by the biography to believe. The father died of a cerebral tumour, and while we cannot reasonably regard this as an unfavourable hereditary influence, it has to be added that Nietzsche's violent migraine and his extreme myopia were inherited from the father's side, and that the father's sisters are described as hysterical and eccentric. On the side of the mother, also, though she

herself was sound and healthy, there would now appear to be mental abnormality ; one sister is said to have committed suicide, and another fell into a state of melancholy, if not insanity. Nietzsche's sister, like her brother, suffers from migraine as well as myopia, and the only other child died at the age of two in convulsions.

Dr. Möbius has been able to bring together various details concerning Nietzsche's physical characteristics. There were no marked stigmata of degenerescence. The circumference of the head (57 cm.) is small, considering that he was moderately tall, and while the frontal region was finely developed the occipital region would appear to be defective. Except as regards sight, all the bodily functions were healthy, as is, indeed, shown by the fact that the physical machine worked on undisturbed for so many years after the mental faculties were in abeyance. It has sometimes been said that Nietzsche's sense of smell was unusually keen ; this is a mistake. Like many other people, he was no lover of bad odours, but there is not the slightest reason to suppose that this was associated with any unusual degree of olfactory sensibility. It may be added that he never smoked, and avoided alcohol. Like many people who do not smoke, he was fond of sweet things. The sexual impulse was certainly weak, while Nietzsche's friendships were very warm ; but the possibility of sexual inversion may be absolutely excluded. The sexual instinct was not entirely absent ; Nietzsche visited prostitutes from time to time, but there was nothing that could be called love ever involved, and no definite *liaisons*. Dr. Möbius makes no reference, positive or negative, to any specific infection, and it is possible that this omission is significant, in view of a statement in the preface to the effect that a certain amount of reticence has seemed desirable. Nietzsche's original condition, it is concluded, may be regarded as neurotic, or as showing a slight degree of degenerescence.

The second part of the study is devoted to the evolution of the disease. The migraine is dealt with fully ; at one time it was associated with choroiditis, and Dr. Möbius holds that the inherited migraine was made more severe by the onset of general paralysis. It is in the year 1882, in *Zarathustra*, or, to be more precise, in the fourth book of the previous work, *Fröhliche Wissenschaft*, that we may first trace the definite indications of the influence of disease. Before that date Nietzsche had published many books, and while a critical student of these books would be inclined to say that the writer was a highly sensitive and probably neurotic subject, no trace of insanity could reasonably be found in them. But in 1882 Nietzsche was for a time overtaken by the typical euphoria of the general paralytic. In a state of marked exaltation and intense mental activity he wrote for some months at great speed, and the result appears in *Zarathustra*, a book written in a prose-poetic form, which is at once a work of unquestionable genius, and at the same time largely the outcome of insanity. Works of this kind are much fewer than some have supposed. The masterpiece of our English poet Smart is an example on a smaller scale.

Dr. Möbius traces as carefully as the data enable him the irregular course of the disease from this period onwards. In the winter of 1887-8 occurred a second period of acute exaltation and tremendous

literary activity. All Nietzsche's later writings date from this period. This was, however, the final flaring up of mental activity before extinction. At the beginning of January, 1889, Brandes, the well-known Danish critic, received from Turin an enigmatic note in a large handwriting, unstamped and incorrectly addressed, signed "The Crucified One." On the day on which that letter was probably posted Nietzsche was found helpless in the street, imperfectly conscious of his surroundings. Friends arrived, and he was taken home to Germany. Gleams of memory came to him from time to time, but he was seldom able to recognise friends, and never became completely aware of his condition or his environment. He died in 1900, so that, as will be seen, the disease ran a course of at least nineteen years.

When we turn to Nietzsche's works, as Dr. Möbius truly remarks, we find many pearls there, though they are not all pearls. It is in the volumes written during the years before the *Zarathustra* outburst that we find the finest and deepest work, mostly written in the form of *pensées*. At this time his thought still ranged freely; he had not yet distorted it by the constant repetition of that counsel of perfection, "Become hard!" by which sensitive souls seek to protect themselves against the arrows of fate. *The Dawn of Day*, which has now at last been published in English by Mr. Fisher Unwin, belongs to this period, and though it is less instructive from the point of view of morbid psychology than *Zarathustra*, it will enable the reader to understand something of Nietzsche at his best and sanest, and to realise what it is that has made Nietzsche so potent an influence in European thought to-day. The translation is careful, though by no means brilliant; the qualities of a great stylist can never be rendered in a foreign tongue.

HAVELOCK ELLIS.

La Logique Morbide. I. L'Analyse Mentale. By N. VASCHIDE and C. VURPAS. Paris: Société d'Éditions Scientifiques et Littéraires, 1903. Octavo, pp. 268. Price 4 f.

Apart from the question as to its precise value, this volume is of some interest as a "sign of the times." It illustrates very significantly the manner in which the scientific study of normal psychology and the scientific study of morbid psychology are leading to an approximation,—it might almost be said a fusion,—of the two branches of study. The book issues from the Villejuif Asylum (where Dr. Toulouse has done much to accentuate this tendency), and is the work of the chief assistant of the laboratory of experimental psychology in the asylum, aided by one of the assistant physicians; while a preface is furnished by Professor Ribot, who may perhaps be described, in the words of the dedication of the volume, as "the first who has attempted an analysis of the mechanism of morbid psychology."

Dr. Vaschide, to whom the chief part in this work evidently belongs, is one of those young Roumanians who in recent years have shown the energy of their youthful nationality by coming to the front in various branches of biological science. The bibliography of his experimental

contributions to normal and morbid psychology during the past seven years occupies some ten pages, and this ambitious, almost feverish activity for work is shown by the scale on which this study of "morbid logic" is planned, for when completed it will occupy four volumes. Dr. Vaschide was led up to it by an earlier study of mental activity in sleep.

In the short preface, which many readers will find the most valuable part of the work, Professor Ribot sets forth the fundamental ideas which underlie the conceptions here developed. Logic, he states, is a province of psychology; it cannot be regarded as a detached and abstract study, for there is no such thing as "pure thought." The "mental analysis" here exclusively studied is a sort of psychological rumination obstinately fixed on all the details of the subject's internal or external life, and even in its weakest form constituting a step towards the abnormal,—the first stage in a morbid evolution,—although when intelligently directed it enters largely into the work of the poet, the artist, and the man of science. This "mental analysis" forms the subject of the present volume, while the succeeding volumes will be devoted to the morbid syllogism, morbid emotion, and morbid intellectual creation.

The plan of the volume is simple. Apart from introductory and concluding chapters, it is entirely occupied by the full and careful examination of four cases,—three from the asylum, the other met with in society,—which cover, as the authors believe, the four different kinds of morbid mental analysis. The first case is one of *somatic introspection*, in which the subject, a woman, concentrates her attention on her own physical mechanism, elaborately watches and detects the minute details of her own anatomical conformation and physiological processes, and embodies her discoveries into a system of delusions; the discoveries may be quite correct, but are wrongly interpreted, as when the subject in this case discovered for the first time her pubic bone and regarded it as a new growth, tending to prove that a general solidification of the tissues was going on. The second case is one of *mental introspection*, in which the subject, instead of living in wholesome ignorance of his mental processes, is perpetually scrutinising his most trifling thoughts and impulses, thinking them over again, questioning them, doubting them, feeling remorse for them, until personality is lost in the contemplation of itself; this subject also was a woman. The third case represents morbid *extrospection*, in which the subject's attention is directed in the same exaggerated fashion on the details of outward events, and the most trifling signs and incidents are interpreted as possessing significance; this case shows the manner in which a woman gradually persuades herself that a man is in love with her, and that she is really affianced to him. The last case is one of morbid *analysis of the cosmic environment*; it is the case of a wealthy young man, apparently an average man of the world, who, as the result of an illness following a wound received in a duel, changed all his habits, became devoted to solitude and metaphysical questions, and especially absorbed in astronomy, spending his income on complex astronomical instruments which he was unable to manipulate, and astronomical literature he was unable to understand. There was no definite insanity, no definite delusions; yet the man's whole nature was changed, and his whole

mental field filled with a shifting phantasmagoria of confused meta-physical and astronomical notions.

While there is much that is instructive and suggestive in the way in which these typical cases are worked out, the chief value of the book seems to lie in its general attitude and spirit, the twofold method of approaching its subject, and the absence of any attempt to exaggerate either the normal element or the morbid element in the mental processes investigated.

HAVELOCK ELLIS.

L'Association des Idées. By Dr. E. CLAPARÈDE. Paris: Doin, 1903. Octavo, pp. 426. Price 4 f.

The latest volume of Dr. Toulouse's International Library of Experimental Psychology is one of the best so far issued. While the volumes have all come from competent hands, the reader occasionally feels that the book was written, rather hastily, to order. Dr. Claparède, who is a privat-docent at the University of Geneva, and editor of the Swiss *Archives de Psychologie*, has executed a most careful and thorough study of his subject, marked not only by fulness of knowledge, but by its critical and impartial spirit. He has the advantage, moreover,—very necessary in the case of a subject which largely owes its existence to a succession of great English thinkers,—of possessing an excellent knowledge of English and American psychological literature.

Association, as the author recognises, by no means covers the whole mental field, but has, as it were, to be dissected out. The author, who assumes throughout the parallelism of psychic and physical phenomena, considers that in dealing with association we are concerned with “a law of cerebral simultaneity” which may be thus stated :—“When the cerebral processes take place simultaneously such a relation is established between them that when one is re-excited the excitation tends to be propagated to the other.”

In the first and much the larger part of the volume we are presented with a summary of all that is known of this associational mechanism of the psychological machine, and Dr. Claparède emphasises the imperfection of our knowledge, and our ignorance of the underlying causes of the forms of association. The pages devoted to a discussion of Flechsig's “associational centres,” which attracted so much attention some years ago, are fairly typical of his method. After pointing out that it is now generally recognised that the structural characters on which Flechsig relied are by no means so fundamental as Flechsig asserted, he proceeds to show that even if one could accept Flechsig's schematic arrangements at his own valuation the gain for psychology would be small; it would assist clinical study, but would not aid psychological comprehension; so far from explaining association, it is probable, the author acutely remarks, that it was the existence of certain notions regarding association which influenced Flechsig's schematisation. A specially interesting chapter in this first part of the book is that on the speed of association, with its summary of the methods and results of psychometrical work. Here and elsewhere due attention is given to the influence of toxic and pathological considerations.

In the latter part of the book Dr. Claparède discusses the importance of association and the exact part it plays in mental life. It is an important factor, but it is one factor only; the experimental investigations of the past twenty years have shown that mental phenomena are far more complex than we had previously imagined, and it is no longer possible to regard the broad and simple principles of Mill, Bain, and Spencer—helpful as they once were—as all-sufficing. Here and throughout the author's attitude is judicial, and he shows no undue partiality to any particular school of thought.

The volume is furnished with indices and a useful bibliography.

HAVELOCK ELLIS.

L'Hypnotisme et la Suggestion. By P. GRASSET. Bibliothèque International de Psychologie Expérimentale. Paris: Doin, 1903. Octavo, pp. 534. Price 4 f.

Professor Grasset makes no attempt to add to the facts of hypnotism; he has only one case of any interest to bring forward. He considers, however, that the facts are already so numerous and so conclusive that we are now less in need of facts than of a "psychological analysis" of hypnotism. This he furnishes by applying to hypnotism his favourite schematisation of the "O centres" and the "polygonal centres." The "O centres" are the higher psychic centres; the "polygonal centres" are the lower psychic or upper automatic centres. It is the polygonal centres, Professor Grasset insists, that are alone affected in hypnotism; and he zealously applies his scheme at every available point. It sounds a little bizarre, but seems to work out fairly well.

Whether or not, however, we accept the author's favourite scheme of the psychic centres, this discussion of hypnotism and suggestion is certainly, on the whole, thoroughly judicious, and marked by its reasonable, common-sense attitude and avoidance of all extreme positions. The reader is somewhat unfavourably impressed at the outset by the obvious fact that Professor Grasset's knowledge of the literature of his subject is confined to French authors. He tells us, indeed, that hypnotism is a "completely French" subject (only excepting Braid). He is thus shut out from any sound historical view of his subject, and has, moreover, no first-hand knowledge of so masterly a discussion of the problems of hypnotism as we owe to Moll—a discussion with which he would be fairly in sympathy. But as the original and translated literature of hypnotism in French is fairly considerable, and as it is undoubtedly true that the most significant movements in the modern development of hypnotism have taken place in France, Professor Grasset's general attitude towards the questions he is discovering is affected less than might be anticipated, and even his references to foreign workers are fair and correct so far as they go.

The author's general attitude may easily be defined. He recognises that it is to Charcot that we owe the scientific recognition of hypnotism, but he also recognises that Charcot was mistaken in generalising from his own individual cases. He follows Bernheim and the Nancy school

in regarding hypnotism as a much simpler process than Charcot supposed, characterised mainly by suggestibility; but as against Bernheim he agrees with Janet in sharply distinguishing the suggestibility of hypnotism from the ordinary suggestibility which more or less marks all human beings in ordinary life: the one phenomenon is pathological, or at all events extra-physiological; the other is physiological. While, however, suggestibility is the main characteristic of hypnosis, there remains a small residue of somatic and not suggested characteristics, which justify Charcot's description; these characteristics are, however, much more varied and much less important than Charcot believed.

There is a good and fairly comprehensive chapter on hypnotism from the therapeutical point of view. The attitude is favourable, though not enthusiastic. Like most practical observers, he considers that hypnotism is useful in hysteria, of very little value in neurasthenia, difficult to apply and unreliable in insanity (since it only affects the polygonal and not the O centres), sometimes of use in alcoholism and morphinomania.

HAVELOCK ELLIS.

Reports of the Cambridge Anthropological Expedition to Torres Straits.
[Vol. II, *Physiology and Psychology*, Part II.] Cambridge: University Press, 1903. P. 141 to p. 223, 4to. Price 7s.

This new instalment of the *Reports* of the Cambridge expedition contains sections on hearing, smell, taste, and reaction times, for all of which Dr. C. S. Myers is responsible; and sections on cutaneous sensations, muscular sense, and variations of blood-pressure, for which Mr. W. McDougall is responsible. It may be said that the work recorded here fully confirms the impression produced by the first part, and it is a great satisfaction to find English workers carrying on so admirably and recording so clearly work of a character which has hitherto been carried out,—so far as it has been carried out at all,—by American, German, French, or Italian investigators. In a scientific expedition such as this,—to the other side of the world, in a strange environment and among a people new to most of the investigators,—it was inevitable that at many points the most practicable methods and the most satisfactory instrumental devices could not always be known beforehand; much of the time was necessarily spent in discovering the best available procedures, and it is all the more remarkable that so many definite and apparently reliable results have been obtained. The observations made were at most points checked by similar observations made either on members of the expedition or on a group of Aberdeen people after the return of the expedition.

Dr. Myers tested auditory acuteness by Politzer's Hörmesser, Runne's clock, and a device of his own, and came to the conclusion that the general auditory acuity of the inhabitants of the islands of Torres Straits is inferior to that of Europeans. He attributes this in some measure to pathological conditions produced by diving, but not altogether, since a similar though less marked deficiency was found among the children. The upper limit of hearing, as tested by Galton's whistle,

was found to be practically the same as among Aberdonians, the advantage, if any, being possessed by the latter. The smallest perceptible tone difference was also found to be somewhat greater than among the Aberdeen people, whether adults or children were compared, though all the natives could readily distinguish an interval less than a tone.

The investigation of the sense of smell here recorded is of considerable interest, both on account of the olfactory acuity commonly attributed to the lower races, and of the very serious, intelligent, and interested manner in which the natives actually went through the examination, which was conducted by the usual method of graduated solutions, Zwaardemaker's olfactometer (as might have been anticipated) not proving practicable for such an inquiry. Japanese camphor, as being both stable and familiar to the islanders, was the chief odorous substance employed. The main difficulty encountered was that at Torres Straits everything, even the water, seemed to have a smell. The conclusion reached is that the average olfactory acuity is slightly higher in Torres Straits than in Aberdeenshire, "a smaller proportion of the islanders having obtuse and a greater number having hyperacute smell-power." The acuity of the children in both communities seemed slightly higher than that of the adults. Dr. Myers considers, however, that the main difference between the native and the European is not so much his greater olfactory acuity as the fact that the native is much more interested in smells, and studies them more carefully. Hence it is mainly by careful attention and practice that he is able to discriminate and remember closely similar odours. The comparisons made by the natives of the various odours presented to them were found to be very ready and apt; they frequently compared them to odours with which they had a real chemical relationship. The likes and dislikes of the natives for the various odours were much the same as obtain among Europeans.

The results in regard to taste were less remarkable. There was a general liking for sweet substances and a marked dislike for bitter. There was no distinctive word for bitter.

Mr. McDougall reached notable results in investigating cutaneous sensations. He found that the power of tactile discrimination of the natives at Torres Straits was about double that of Englishmen. This delicate tactile discrimination is considered to be a racial characteristic, for it was not found at Sarawak. The power of tactile discrimination was not accompanied by unusual accuracy of tactile localisation. It is interesting to observe also that neither was it accompanied by great sensibility to pain, as tested by Cattell's algometer. It was found, indeed, that the susceptibility of the natives to pain was hardly half as great as that of Englishmen.

In discrimination of small differences of weight the natives were found rather superior to Englishmen, although such tests were quite new to them. In the size-weight illusion (the estimation of the weight of tins having same size but different weights) the natives were much more astray than the English, and the native women more so than the native men. Mr. McDougall seems to think that the Müller-Schumann explanation of this illusion destroys its value as a test of suggestibility.

There seems a little confusion here. The fact that an illusion is normal leaves the question of suggestibility unaffected. If you are travelling in a slow train which is passed by an express train moving in the same direction you have the illusion of travelling backwards. The illusion is normal; but the question of suggestibility still comes in if your judgment yields to the illusion. The size-weight illusion is certainly normal; even the blind experience it in some degree (as Rice has shown); but the fact that it is explicable leaves quite unaffected the question of the subject's suggestibility, which is simply concerned with the measure in which his intelligence yields to his sensations.

The experiments on blood-pressure in relation to mental activity led to little result, as is not surprising in view of the difficulty and complexity of the matter.

The reaction-time results (although only a simple registering apparatus had been included in the outfit of the expedition) were more interesting, and it was found unexpectedly easy to explain to the islanders the general bearing of reaction-time experiments. The average auditory reaction of the young Torres Straits islanders was found to be not appreciably different from that of the Englishman, but his visual reaction was distinctly longer. The Sarawak native reacted more quickly than the Englishman, both to auditory and visual stimuli. Dr. Myers discusses these results in relation to the observations made by others, and while not reaching any final conclusion is inclined to believe that there are real racial differences in reaction time.

HAVELOCK ELLIS.

Harvard Psychological Studies. Vol. I. Edited by HUGO MÜNSTERBURG. New York: Macmillan and Co. Large 8vo, pp. 654. Price 4 dollars.

This volume (which also constitutes the fourth of the *Psychological Review* Monograph Supplements) presents sixteen experimental investigations carried out under Professor Münsterburg's supervision in the Harvard Psychological Laboratory. They deal mainly with problems of perception, memory, æsthetic feeling, and animal psychology, the last being a department of psychology to which special attention is devoted at Harvard, the methods adopted being so far as possible those usually applied in human psychology. Among the specific subjects explored were tactual illusions, the relation of eye-movement to after-images, the control of memory images, rhythm and rhyme, the existence of symmetry in primitive and civilised art, the instincts, habits, and reactions of the frog. It would be difficult to summarise these studies briefly; we may content ourselves with noting the comment of Professor Münsterburg that (as must, of course, often happen in pioneering investigations) the various authors are sometimes in contradiction with each other, and not seldom in contradiction with his own views and conclusions.

The concluding paper, in which Professor Münsterburg gives a brief summary of his own views as to the position of psychology in the system

of knowledge, should not, however, be passed without notice. As he has already explained at length in several books, this distinguished psychologist is opposed both to the association theory of the English school and the apperception theory of Wundt as a completely satisfactory expression of the facts. The former is one-sided and barren, the latter illogical. He desires to make a synthesis of both which shall have the defects of neither, developing a psycho-physical theory which shall consider the central process in its dependence not only on the sensory but also on the motor excitement, thus attaching specially great importance to the centrifugal processes of mental life. This he calls the action theory. In the present study he considers the position generally assigned to psychology in the system of knowledge, and finds that, though usually a very important position, it remains vague. He considers that this is due to the fact that there are really two different kinds of psychology—the psychology of phenomenalism which explains, and the psychology of voluntarism which interprets. He holds by the first, but does not believe that on this account the propositions of voluntarism are wrong in its interpretative account of real life and of immediate experience; “on the contrary, voluntarism is right in every respect except in believing itself to be psychology.” From the voluntaristic point of view we can obtain a more direct account of man’s real life than psychology can hope to give. It is not psychology, though “it is the voluntaristic man whose purpose creates knowledge and thus creates the phenomenalistic aspect of man himself.” These two aspects of inner life are not, however, ultimately independent and exclusive, the subjective purposes of real life demanding the labours of objective psychology, so that the last word is not dualistic but monistic. The difference is only one of logical purpose and treatment, of point of view. These remarks lead up to a scheme of the sciences, under this double aspect, presented in an elaborate table.

HAVELOCK ELLIS.

On the Physiological Feebleness of Women [*Ueber den physiologischen Schwachsinn des Weibes*]. Von Dr. P. J. MÖBIUS. Halle, 1903. Octavo, pp. 123. Price 1 mark 50 pf.

No one need be surprised to learn that those who differ from Dr. Möbius on this vexed question have tried to fasten upon him the reproach that he is an enemy to women. It has been so customary in society, as well as in light literature, to give the fair sex compliments and to avoid unpleasant truths, that all sincerity is lost in speaking, and to many persons even in thinking. It should, however, be borne in mind that those who wish to change the time-honoured relations between men and women have no right to wax angry because they get a plain answer to a question which they themselves have provoked. The pamphlet has now passed into the fifth edition. At the request of his publishers the author has reprinted the adverse criticisms which have appeared; and if these are all, he is fortunate, for there is no serious attempt to meet his arguments. The only critique on this side which is worth reading is one in the Berlin *Zukunft*, by Friede F. von Bülow.

This lady argues that the doctor's fears are visionary, that the desire in women of having a husband and children, especially children, is naturally so strong that it will always lead them to satisfy it, and that learned and professional women will never bear more than a small proportion to the others.

Yes, nature will come in winner in the end ; but people may fight against nature with much injury both to health and morals. The programme let out by some of the advocates of the "emancipation" of women seems a dangerous one, both to society and to the State, and none the less dangerous that it is pushed on step by step, so that the unthinking are ready to imagine that it is ill-natured to refuse a concession which is sure to be followed by a new demand. In a matter with so many aspects, and where so many considerations, passions, and affections enter, the controversy may be carried on for any time. The intellect alone is rarely allowed to decide, and people may not be reasoned out of what they were never reasoned into. Nothing is more difficult than to rouse ordinary men to the danger of distant consequences, and when they are unwilling to see them it becomes impossible. The desire to invade men's functions and occupations, and the proposals that whatever men do women should be allowed to do also (save serving in the army and navy), provokes the inquiry whether women's faculties are of the kind to fit them for the tasks to which they aspire. Those who take an unfavourable view of their claims point out how little women have accomplished in all branches of knowledge, in literature, in art, and in music ; while the "Feministen," as Möbius calls them, argue that hitherto they have been kept in bondage and subjection by the selfishness of men, and so deprived of proper opportunities of distinguishing themselves. To those who wish some reading to prompt their convictions on this subject we can recommend Dr. Möbius's treatise. He possesses a gift, rare in Germany, of putting his meaning into plain, easy, and forcible language ; he has a good command of the facts, and has, we think, taken the range of the subject. What may be of special interest to the readers of this JOURNAL are his observations upon the comparative weights of the male and female brain.

He remarks that there is a difficulty in appreciating the comparative weights of the male and female brain as given by Bischoff, for one with a small brain might have more mental activity than one with a larger, because the smaller might have a larger proportion of those parts most important to mental life. But Rüdinger has shown that in new-born infants the whole group of convolutions enclosed by the Sylvian fissure is simpler and with fewer bends in the female infant than with the male, and that the island of Reil, in all its measurements, is bigger, more convex, and more complicated in the male than in the female infant. He has shown that in the adult the third frontal gyrus is smaller and simpler in the woman, especially that portion which lies next the median gyrus. From his table it appears that these differences are considerable. Rüdinger has further shown that in the female brain the whole middle gyri of the parietal lobe and the inner upper bridging convolution are much less developed in men of low mental power. He found similar configuration of the parietal lobe, while in men of good intellect the large

development of the parietal lobe presented quite another type. From this it is shown that parts of the brain of great importance to mental life, the convolutions of the frontal and parietal areas, are less developed in women than in men, and that this difference already exists at birth. As man and woman have the same convolutions, but of different sizes, both have the same mental properties; the difference is a question of degree.

Möbius finds these data confirmed by his measurements of heads. A circumference of 57 cm. and upwards is generally met with in men of good mental power; below this standard the capacity is mostly inferior; while in women one meets with heads of 57 cm. and 56 cm. circumference, and often heads as low as 52 cm. and 51 cm. He does not wish to hinder women studying medicine, though he would not encourage it.

Möbius thus appeals to medical men:—It is of much importance that physicians should gain a clear conception of the female brain and mental character, so as to know its weaknesses, and that they should do all that lies in their power, in the interest of the human race, to resist the unnatural efforts of the feminists. The health of the people is endangered by the perversity of the new woman. Nature is a stern mistress, and threatens the breach of her rules with severe penalties. She has decreed that the woman should be a mother, and if she seeks to lead a life apart it is the worse for her. WILLIAM W. IRELAND.

Ueber die Wirkung der Castration [On the Effects of Castration]. Von Dr. P. J. MÖBIUS. Halle, 1903. Price 2 marks.

After a learned historical introduction, Dr. Möbius goes on to examine the effects of castration on men, women, and on the lower animals. As might be expected, these are more marked if the mutilation occur at an early age. The alterations observed affect not only the breasts and genital organs, but also the glands, the fatty tissues, the muscular system, and the bones. As the larynx does not widen, eunuchs retain their boys' voices; hence some eunuchs have gained notoriety as public singers. The mental powers are diminished, though some eunuchs have shown ability and even courage. In the wars with the Goths the eunuch Narses was thought a worthy successor to Belisarius. In Eastern courts, the eunuchs have often much influence, and several are mentioned in history. The sentiment of love is not always extinct in these mutilated beings. Operations such as the removal of the ovaries, undertaken in the hope of ending erotic delusions, have not been justified by the results arrived at. It has been proposed in America to castrate male imbeciles who have shown marked erotic propensities, and in some instances this has been done.

Altogether this little treatise is written with the author's usual ability and thoroughness. He has availed himself of every source of information, so that it forms the most complete work on the subject.

WILLIAM W. IRELAND.

The Story of my Life. By HELEN KELLER. *With her Letters* (1887—1901) and a *Supplementary Account of her Education, including Passages from the Reports and Letters of her Teacher, Anne Mansfield Sullivan.* By JOHN ALBERT MACY. Illustrated. New York: Doubleday, 1903. Crown octavo, pp. 441. Price 7s. 6d.

This book describes another great triumph of the teaching art achieved in the United States. The first of these was Laura Bridgman. It was Dr. Howe, of Boston, who conceived and carried out the task of teaching Laura, a child eight years old, who had lost her sight at the age of two years. Many accounts of this case have been published in books and periodicals, and there is a separate *Life of Laura Bridgman* by Lamson. Not so well known is Oliver Caswell, blind and deaf from infancy, who was also educated at the Perkins Institution for the Deaf and Dumb at Boston.

Helen Keller was born in Alabama in 1880. She lost her sight and hearing when eighteen months old. Before this she had been a forward child, could walk well and speak a little. The impressions of sight and sound seemed never to have been quite effaced; but she ceased to speak. As the effects of the illness passed away she could find her way about the house, used to fold clothes, and creep about looking for guinea-fowls' eggs in the long grass. She felt everything with her hands, and began to make signs. A shake of the head meant "No," and a nod "Yes." A pull meant "Come," and a push "Go." "Was it bread that I wanted?" she tells us. "Then I would imitate the acts of cutting the slices and buttering them." She even practised a few mischievous tricks, such as locking her mother in the pantry, and when no one understood what she wanted would get into fits of fury, scratching and kicking. At last her father took her to the Perkins Institution at Boston, when a special teacher was procured for her. At that time Helen was nearly seven years old. From this date we have two parallel narratives—Helen's account of her own recollections and the awakening of her intellect, and the teacher's descriptions of her methods and the progress of her pupil. They support and illustrate one another; but the teacher's account seems to be the most valuable. Helen Keller's own narrative bears marks of the polish of another hand. There are many passages indicating a writer who could both see and hear. Some of these may be merely the reproduction of phrases which she has taken from her reading, as when she speaks of the lustrous shell of the nautilus, which at night sails on the blue sea. It would not occur to a blind person that the sea is not blue at night. This explanation, however, does not hold good with all the passages. Helen's letters seem to be presented unchanged, and it is interesting to trace the gradual elaboration both of thought and style from the first rude efforts.

The conjunction was favourable of a most skilful teacher and a pupil naturally intelligent. Anne Sullivan evidently possesses an original mind and sound judgment, with unwearied patience and a warm and loving heart. Her greatest difficulty in bringing the light of knowledge into the shrouded mind of her little pupil was to get her to apprehend that there were symbols for her sensations and thoughts by which she could

have communication with other persons. She failed to associate the signs for milk, confused between the liquid, the vessel which held it, and the act of drinking. "We went out," writes Miss Sullivan, "and I made Helen hold her mug under the spout while I pumped, and then, as the cold water gushed forth filling the mug, I spelled w-a-t-e-r in Helen's free hand. Helen thus describes the first apprehension of the symbol:—"I stood still, my whole attention fixed upon the motions of her fingers. Suddenly I felt a misty consciousness as of something forgotten, a thrill of returning thought, and somehow the mystery of language was revealed to me. I knew then that w-a-t-e-r meant the wonderful cool something that was flowing over my hand. That living word awakened my soul, gave it light, hope, joy, set it free. There were barriers still, it is true, but barriers that could in time be swept away."

All the way back Helen was highly excited, and learned the name of every object she touched, so that in a few hours she had added thirty new words to her vocabulary. With this key the portals of knowledge were successively opened. She was taught finger signs, then to read embossed type, to write the braille characters and ordinary writing, and to use the typewriter; finally by muscular adjustments to use her vocal apparatus, and to follow words by putting her hands on the mouth and throat of the speaker. Her devoted teacher went with her everywhere, and by finger alphabet kept her informed of everything around. She got lessons in plant and animal life, and in the events of the day and in the history of the world. Helen eagerly read such books as were in embossed type, and was taught German, French, Latin, and Greek. It should be borne in mind that this girl only knows words as combinations of letters or through the sense of muscular adjustments; hence it seems that the enormous expenditure of mental energy required to teach her four foreign languages might have been much better utilised in conveying to her real knowledge. We do not, therefore, read with unlimited satisfaction about her passing the preliminary examination in Greek and Latin, German and French, for Radcliffe College, and think that she was wisely advised not to go on studying for a degree at Harvard University. But in this age it is difficult to resist the craze for examining and being examined, and Helen was spurred on by the desire to keep pace with other girls. She also passed in geometry and algebra, though for these studies she had little taste. These achievements show under what great difficulties the human mind can successfully work. It is pleasing to observe how much this girl so cruelly stricken by disease enjoyed life through the few avenues left. She delights in rowing, riding, tobogganing, bathing, and swimming. She feels the vibrations communicated by a musical instrument like the piano. The sense of smell, though of little use in conveying knowledge, affords her much pleasure; she loves the odour of the pinewoods and the perfume of the flowers. Surrounded with sympathetic friends, she has been guarded from many of the cares and troubles of life, and only knows of the evils of the world by what reports are allowed to reach her. By long attention and practice and interpretation Helen is exquisitely sensitive to every agitation and thrill in her companions. Miss Sullivan tells us that when she was being examined by the aurist in Cincinnati "all present were astonished when she appeared not only to hear a whistle, but also an ordinary tone of

voice. She would turn her head, smile, and act as though she had heard what was said. I was then standing beside her, holding her hand. Thinking that she was receiving impressions from me, I put her hands upon the table and withdrew to the opposite side of the room. The aurists then tried their experiments with quite different results. Helen remained motionless through them all." As regards the question of a sixth sense which some people have ascribed to Helen Keller, Miss Sullivan observes, "The existence of a special sense is not evident to her or to any one that knows her. Miss Keller is distinctly not a singular proof of occult and mysterious theories, and any attempt to explain her in that way fails to reckon with her normality. She is no more mysterious and complex than any other person. All that she is, all that she has done, can be explained directly, except such things in every human being as never can be explained."

The editor, Mr. Macy, deserves much credit for the arrangement and treatment of the subject. The illustrations are tastefully designed and well executed. Altogether this is a work not only valuable to the psychologist, but likely to be very pleasing to the intelligent general reader.

WILLIAM W. IRELAND.

Part III.—Epitome of Current Literature.

1. Anthropology.

Polydactylism and Epilepsy [Polydactylia ed epilessia]. (Arch. di psichiat., vol. xxiii, fasc. 6, 1902.) Lai.

THE author describes two cases of polydactylism, one occurring in an adult epileptic, the other in a baby with hereditary taint of that neurosis.

The patient in the first case was a heredo-alcoholic, whose fits began in his twenty-sixth year after a heavy drinking bout. The accessory digit, consisting of two phalanges with a nail, was present on either hand, but not on the feet. It was articulated to the ulnar margin of the little finger. The same anomaly was said to have existed in the patient's father. The patient presented numerous stigmata of degeneration.

In the second case the supernumerary digit, which consisted of a single phalanx bearing a nail, was only present on the right hand; it was articulated to the radial side of the first phalanx of the thumb. No other physical anomalies were present; and no case of polydactylism was known to have occurred in the family. The only hereditary taint was epilepsy and mental debility in a maternal aunt.

In neither case were the patient's parents of near kin.

The author considers that his cases go to show a connection between polydactylism and epilepsy through a common origin in degeneration.

W. C. SULLIVAN.

Anatomical Note on a Case of Deformity of the Right Upper Extremity in an Insane Patient [*Nota anatomica sopra un caso di deformità all' arto superiore destro osservata in un frenastenico*]. (*Arch. di Psichiat.*, vol. xxiii, fasc. 6.) Pianetta.

In vol. xxi of the Archivio (1900) the author published a note on some cases of morphological anomalies of the extremities in the insane; and in the present paper he records the result of an autopsy on one of these patients—an hereditary degenerate with partial syndactylism of the right hand. Several anomalies were found in the bones of the hand and in the muscles of the forearm. The osseous abnormalities were most notable in the second phalanges; in two fingers (index and middle) that phalanx was absent; in the ring and little fingers it was rudimentary, and in the latter it was partially blended with the ungual phalanx. The ungual phalanges of the index and middle fingers were united, and bore a single nail. The os magnum and unciform bone were blended. The rest of the hand skeleton was normal. The muscles of the hand and forearm were all somewhat atrophic. Their most important anomalies were the absence of the extensor indicis and of the tendon of the flexor sublimis digitorum to the little finger, and a reversal of the ordinary arrangement of the flexor tendons, the deep flexor being perforated by the tendons of the superficial muscle.

W. C. SULLIVAN.

The Physiological Stigmata of Degeneration [*Les stigmates physiologiques de la dégénérescence*]. (*Gaz. des Hôp.*, Feb., 1903.) Mayet.

The author divides the stigmata of degeneration into four classes—*anatomical, physiological, psychological, and sociological*. The first group he discussed in an earlier paper contributed to the same journal, and the third and fourth groups he proposes to deal with later on. The present paper is devoted to the physiological group, and is, as the author expressly points out, a simple catalogue of the several functional disorders which, for good, bad, or indifferent reasons, various observers have brought into the wide net of “*dégénérescence*.” It is needless to add that the catalogue is a long one, seeing that some authors claim for the degenerate a monopoly of tubercular diseases and of post-nasal adenoids; and one expansionist even goes so far as to insist that every departure from the left occipito-anterior presentation in childbirth is to be accounted a stigma. The paper is followed by a useful list of the literature on the subject.

W. C. SULLIVAN.

2. Physiological Psychology.

The Psychology of the Dying [*Contribution à la Psychologie des Mourants*]. (*Rev. Phil.*, Dec., 1902.) Piéron, H.

In various cases, the author has noted at the moment of death a *cœnæsthetic* sensation—doubtless associated with arrest of motor, respiratory, and circulatory functions—which is not without interest. The cases here described were mostly tuberculous, and included individuals of both sexes, and of atheistic as well as religious beliefs.

In all the cases, the last sensation to which expression was given was one of flying, of moving upwards. In some cases death was peaceful, in others painful. In one case a girl died clasping the iron bars of the bed, in horror of being borne upwards.

What is the cause of this sensation? Piéron, no doubt rightly, associates it with the similar sensation of rising and floating commonly experienced in dreams, and with that feeling of moving upwards and resting on the air which is sometimes experienced by persons in the ecstatic state, and which in the lives of St. Ida of Louvain, and many other saints, is treated as a real phenomenon.

The explanation is evidently quite simple. In an ecstatic person in whom this sensation occurred, Janet found anæsthesia of the sole of the foot. Bergson has suggested that in dreams of flying there is numbness and arrest of circulation due to pressure on the parts supporting the weight of the body. We must, Piéron argues, apply the same explanation to the sensations of flying experienced at the moment of death.

HAVELOCK ELLIS.

Right-handedness and Left-handedness. (Journ. Anth. Inst., July—Dec., 1902.) Cunningham, D. J.

This subject was chosen by Professor Cunningham for the third Huxley Memorial Lecture of the Anthropological Institute. He deals with it in a thorough manner and with wide knowledge of the extensive literature. He regards right-handedness as an organic acquirement of early man, due to natural selection. There is no good reason to show that monkeys are right-handed, and evidence obtained from Dr. Taylor, at the Darenth Asylum, showed that microcephalic idiots tend to be ambidextrous (five right-handed, four ambidextrous, one left-handed). The functional pre-eminence of the brain is the cause, and not the result, of right-handedness. Left-handedness may be regarded as due "probably to a transposition of the two cerebral hemispheres in the same way that transposition, either partial or complete, of the thoracic and abdominal viscera occurs." It is noteworthy that there is a large proportion of left-handedness in those showing transposition of the viscera.

Professor Cunningham rejects the explanation resting on the supposed better blood-supply of the left hemisphere, finding that facts are against it. Nor is it true that the left hemisphere is either heavier or more convoluted than the right. Professor Cunningham himself hoped to find an explanation in a comparison of the motor centres for the arm in the two hemispheres, but finds that in man, and even to some extent in the ape, this area is more exuberant on the *right* side. He concludes that the attempt to discover a structural basis for the functional superiority of the left cerebrum is at present baffled, but that one must still believe that such structural basis exists.

HAVELOCK ELLIS.

Internal Autoscopy [L'Autoscopie Interne]. (Rev. Phil., Jan., 1903.) Sollier, P.

Autoscopy is an abnormal power of observing and representing the anatomical and functional state of the subject's own internal organs. If

the representation is external, in a hallucinatory form, it is termed external autoscopy ; if the observation is direct, it is termed internal autoscopy. The phenomenon, which occurs most clearly in the hypnotic state, is analogous, Sollier suggests, to the power shown in premonitory dreams, by which the disturbance of internal organs becomes definitely clear to sleeping consciousness before it is perceived by waking consciousness. Autoscopy was vaguely known to the ancient magnetisers ; more recently attention was called to it by Féré ; it has been most thoroughly studied by Sollier and Comar.

Sollier considers that the phenomenon is most definitely observed in hysterical patients, who in the hypnotic state attain a conscious knowledge of organs which in the subject's ordinary state are anæsthetic. Sollier's own theory on hysteria is well known ; he looks upon it as a fundamental disturbance of the cerebral cortex which may be regarded as a sort of sleep, varying from a simple diminution of the cortical centres to their complete arrest ; this state is translated into varying conditions of the body and viscera—vaso-motor, trophic, sensorial, motor, etc. Partial or complete recovery from this somatic sleep is attained in various ways, and notably in the hypnotic state. This is the theory which Sollier seeks to apply to the explanation of the phenomena of autoscopy.

A typical case is furnished by a country girl, a patient of Comar's, without any education, who had formerly been treated for coxalgia ; in a state of hypnosis she gave a fairly accurate description of the joint, in homely language, as it would appear without organic lesion. The same patient said, on another occasion, feeling the lower part of her abdomen, "It is strange what I have there in the middle ; I did not know I was made like that. I have a sort of pear there, with the point downwards, and with strings from the top on each side turning forwards ; there are several of them in the folds of a veil, and in one of the folds there is something like a nut ; it's funny." The same patient described the bladder, ureters, and urethra, the stomach with its mucous folds and glands, and also the heart. Another patient of Comar's described with much accuracy and precision her arteries and their bifurcations, indicating the positions with the point of her finger ; and even discovered by autoscopy, if one may trust the observation, the whole course of the circulation back to the heart.

Sollier describes in considerable detail three cases of hysteria in which autoscopy existed. The most important was a girl æt. 22, who, as he had been able to assure himself, was quite ignorant concerning the structure of the body. This subject could under certain conditions represent, or, rather, *see*, her vessels, heart, blood, lungs with bronchi and pulmonary vesicles, intestines, ovaries (described as like almonds), tubes, uterus, vagina, muscles, tendons, skeleton, and brain. She could not only describe the macroscopic appearance, but even (as regards ovary and brain) the microscopic constitution.

Sollier considers that the cases of hysteria which show autoscopy in the hypnotic state are comparatively rare ; it occurs mainly in very severe and old-standing cases with visceral disturbances, and appears, usually quite unexpectedly, when the function of an anæsthetic or disturbed organ is being re-established. Surprising as the phenomenon

may be, Sollier thinks it is possibly merely a question of degree between autoscopia and our usual confused perceptions of internal functions. Although the subjects frequently use the word "see" there is of course no actual vision; autoscopia would appear to be a representation founded on coenæsthetic sensations originating in the organs. Sollier admits, however, that the subjects often rightly describe the colours of organs, and cannot explain this.

Sollier fully discusses the whole question, and meets the obvious criticisms that may be made. He gives his reasons for believing that unconscious reminiscence, suggestion, and trickery may be absolutely excluded. The sincerity of the subjects is also suggested by the method of description; neither the scientific nor the common names of organs are used, and it is only after describing what she sees that the subject adds, "That must be such and such an organ."

Sollier is no great believer in the explanatory force of the word "suggestion" in hypnotic phenomena, and he considers that in autoscopia we may learn to see more clearly what it is that happens in hypnosis. The hypnotic subject is able to obey an order referring to the unconscious and involuntary system, not because it is "suggested," but because for the time the unconscious and involuntary part of the organism has become comparatively conscious and voluntary, and therefore responds in the same way as under ordinary circumstances the organs ruled by striated muscle respond. HAVELOCK ELLIS.

3. Clinical Psychiatry.

On the Utility of Lumbar Puncture in the Diagnosis of General Paralysis. (Journ. of Ment. Path., Oct.—Nov., 1902.) Joffroy and Mercier.

In this paper, originally communicated to the Congress of French Alienists held at Grenoble in 1902, the authors record the result of an inquiry into the value of cytological examination of the cerebro-spinal fluid in general paralysis.

A series of punctures in healthy persons and in ordinary insane subjects showed the number of leucocytes per c.mm. in that fluid to be usually not more than two. In the general paralytic, on the contrary, it almost invariably exceeded five. Seventy punctures were made on 48 different patients suffering from that disease; in 17 instances, though no exact count was made, the number of leucocytes was seen to be excessive; in the remaining 53 instances the corpuscles were counted, and found to be as follows:—In four cases they varied between 0 and 5 per c.mm.; in eight cases they numbered between 5 and 10; in thirteen cases they varied between 10 and 20; in eighteen they varied between 20 and 50; in eight they numbered between 50 and 100; in one they numbered between 100 and 200; and finally, in one case they numbered 204.

Thus 66 out of 70 punctures showed a notable increase of the white corpuscles. Of the four instances in which the number was under 5 per

c.mm., three were in cases which their very slow evolution would rank in a special category, so that there was only one case of unequivocal general paralysis which failed to show hyperleucocytosis.

On the other hand, in five patients not regarded as general paralytics there was an increase in the number of leucocytes to 5 per c.mm.; one was a case of syphilitic meningomyelitis with Argyll-Robertson pupils; the other four were cases of tabes with mental symptoms. Except in these five instances the authors have failed to find this condition in any form of mental disease other than general paralysis. In fourteen cases of alcoholism, for instance, and in ten cases of dementia præcox, the number of corpuscles never exceeded 2 per c.mm. Several examples are briefly indicated, showing the decisive value of this sign in doubtful cases, especially in distinguishing early general paralysis from alcoholism with exaltation and from mania.

The authors find that the hyperleucocytosis precedes the speech and pupillary symptoms; and that it is, in fact, most marked in the initial period of the affection. They regard it, therefore, as the most constant sign of general paralysis, and consider that its absence is sufficient to dismiss the suspicion of that disease. Its positive value is equally high if other conditions capable of producing it, *i. e.*, especially syphilitic and parasyphilitic diseases of the nervous system, can be excluded.

W. C. SULLIVAN.

Two Cases of Polyneuritic Mental Confusion [Deux cas de confusion mentale polynévritique]. (Bull. de la Soc. de Méd. Ment. de Belgique, Feb., 1903.) Crocq.

In 1887 Korsakoff described polyneuritic psychosis as a special morbid entity, particularly characterised by amnesic disorders. Another name which he gave to this condition was toxæmic (psychical) cerebropathy. He recognised two varieties—one slight, characterised by amnesia affecting recent events; another severe, with marked amnesia accompanied by false reminiscences and delusions. This view has since been severely criticised by Babinski, Chaslin, Séglas, Ballet, etc., who maintain that practically this psychosis of Korsakoff is only a form of mental confusion, and in the two conditions one finds identical amnesic disorders.

The two cases described by Crocq help to elucidate this interesting question:

1. M. L—, female, æt. 54, alcoholic, after mental worry became excited, had delusions, and was dirty in her habits for three months. The muscular atrophy, absent knee-jerks, etc., observed, correspond to the usual signs of alcoholic paralysis (or peripheral neuritis). Mentally the characteristics were—loss of identity, amnesia, visual and auditory hallucinations. She improved markedly.

2. L. D—, female, æt. 68. First under observation January 10th, 1902. She had given way to drink since 1899. The onset of her illness dated eighteen months ago. The symptoms—pains and weakness in the legs, tenderness of muscles on pressure, incoherence of speech, atrophy of legs and arms, then contracture, etc.—all suggest peripheral (alcoholic, no doubt) neuritis. The knee-jerks were apparently strong,

however—no doubt because the anterior crural nerve was not affected. Mentally the dominant feature was amnesia, especially for recent events; she had also false reminiscences, but, as proving the relative integrity of her intellectual faculties, the patient realised that her memory played her tricks (her condition was analogous in this respect to that of a patient with motor aphasia), her condition being therefore unlike senile dementia. Under treatment she improved.

These two cases with decided polyneuritis are, according to Crocq, typical examples of mental confusion, and militate strongly against Korsakoff's view of the autonomy of polyneuritic psychosis.

H. J. MACEVOY.

A Case of Septicæmic General Paralysis [Un cas de paralysie générale septicémique]. (Bull. de la Soc. de Méd. Ment. de Belgique, Feb., 1903.) Crocq.

B. F—, female, æt. 33, admitted January 18th, 1903. Married in 1896; in January, 1900, miscarried at the third month and developed severe streptococcic infection with fever and delirium, which lasted fourteen days and nearly proved fatal. During her convalescence, one month after the miscarriage, she had a convulsive seizure with temporary paralysis of the tongue and right arm (for a few hours). These attacks recurred at intervals of three days to fourteen days, and were followed by various transitory paralyses. Her speech became difficult, her ideas confused. Later she had auditory hallucinations and delusions of persecution, and was sent to St. Jean Asylum on January 19th, 1902. On October 12th she returned home improved, but weak intellectually. Five days later she lost consciousness, and on the following day became maniacal and incoherent, and dirty in her habits; her legs were contracted; reflexes exaggerated; light reflex feeble. No history and no evidence of syphilis could be obtained on careful inquiry and examination.

Reviewing the etiology of general paralysis, Crocq is of opinion that the most important factor is a *locus minoris resistentiæ* as regards the brain, *i. e.*, a predisposition; and that numerous occasional or exciting causes may determine the onset of the disease. Among the latter, infections and intoxications come first; syphilis heads the list by far, but other toxic factors must be considered, and among them puerperal septicæmia.

H. J. MACEVOY.

New Contribution to the Study of Post-operative Psychoses [Nouvelle contribution à l'étude des psychoses post-opératoires]. (Arch. de Neurol., 1903, No. 87.) Picqué and Briaud.

The authors restrict the denomination of post-operative psychoses to delusional disorders which occur in the sphere of ideation alone; so that neurasthenia, for example, following upon an operation, is excluded. They also exclude delusional states directly due to toxæmia, which are transitory and differ in their symptoms and treatment—just as puerperal insanity differs from the transitory puerperal delirium arising from septicæmia. They admit, however, that the line of demarcation between these two groups of cases may be hard to draw. Moreover, as

has been pointed out by Magnan, we may have a febrile or toxæmic delirium superposed upon a true psychosis. Hereditary predisposition is a marked feature in post-operative insanity, so much so that one may deny the possibility of an operation alone causing a psychosis in a healthy subject; at the same time this is no argument for rejecting this class of cases. Gynæcological operations are not more likely to cause post-operative insanity than other operations; the confusion with simple neurasthenia has led to this opinion. The symptoms of post-operative insanity are most variable, and have furnished some justification for denying its existence as a separate form; moreover, in cases where general paralysis and other well-defined psychoses have supervened (or appeared to) upon an operation, we must attribute the occurrence to a mere coincidence. The variation in symptoms, or in the character of the psychosis, arises from the variability in the mental conformation of the patient and the varying predisposition—the all-important factor. The nature of the operation itself is another factor to be considered. The prognosis varies considerably as well as the treatment.

Notes of nine cases are appended. (1) A woman æt. 36, after curetting of the uterus, developed melancholia with delusions of negation, hallucinations, suicidal tendency. Predisposition (hereditary) marked; one cousin insane, father alcoholic. (2) A woman æt. 48, with ideas of suspicion, developed definite delusional insanity of persecution after an operation for removal of a uterine fibroid. In the third case a woman developed symptoms simulating those of general paralysis, etc. The paper, as a whole, is a useful contribution to the study of post-operative insanity, but does but little to clear up the haze which obscures the subject.

H. J. MACEVOY.

4. Treatment of Insanity.

Paraldehyde as a Hypnotic. (*Monats. f. Psych. u. Neur., Dec., 1902.*)
Bumke.

This is a serious study of the claims advanced in favour of paraldehyde as a hypnotic since its introduction into medicine in 1882. The ideal soporific which shall with certainty and without delay secure an untroubled refreshing sleep, approaching natural sleep as nearly as possible; the soporific which shall neither lose its efficacy nor accumulate its effects, and which shall, moreover, be easily dispensed and agreeable to take;—such a drug, like the philosopher's stone, has yet to be discovered. Among soporifics, however, as things are, paraldehyde can claim many virtues, and further experience and better knowledge have only strengthened its position. In the Freiburg Asylum, Dr. Bumke says that paraldehyde has more than held its ground against sulphonal, trional, and hedonal, and that it and scopolamin are now alone employed.

Far too much has been made of the unpleasant taste of paraldehyde, and of the fact that the patient's breath smells of the drug. The severer

strictures on these counts depend probably on the use of impure preparations. Dr. Bumke states that, administered in a peppermint tea strongly sweetened with sugar candy, it is readily taken, and that in respect of the odour of the breath they have had no inconvenience in the wards. Administration in enema form has in general not been found suitable, nor the hypodermic use available, the drug being too irritating.

Clinical experience has for the most part confirmed the teachings of the physiological laboratory, according to which the sensitiveness of the nervous system is in the end of the cerebrum, spinal cord, and medulla oblongata. Only very large doses affect the last named, and of the centres herein contained it is the respiratory which succumbs before the circulatory.

The effective dose in man is on the average not less than 45 minims ; more than 60 minims will rarely be required ; and doses of 75—90 minims gave in Dr. Bumke's experience good results even in the severest forms of excitement. Sleep sets in in from three to fifteen minutes, and is for the most part unaccompanied by symptoms. Descriptions of vertigo, headache, sense of fulness in the head, thick speech, thirst, etc., seem to apply only to observations before 1884, and Bumke considers that they must have been due to impurities, probably to fusel oils.

The duration of sleep is from five to eight hours.

The experience in Freiburg is strongly against an habituation of the system to the drug. It was not necessary to raise the dose. With some exceptions—Albertoni, Berger, Sachs, Daman—this is the general experience. A sedative action on the brain in addition to the hypnotic action has been asserted, and probably exists—it is difficult to demonstrate. Upon the spinal cord the experimental evidence is definite that the functions of the grey matter are diminished—whence the reduction or abolition of the reflexes. Lethal doses of strychnine have thus been overcome in animals by paraldehyde, and two cases of tetanus in man are reported as cured by the same means (Ottavi, Tomasini). With ordinary dosage it is, however, difficult to show this effect. The effect upon sensation is likewise difficult of demonstration in man ; in any case it is inconsiderable.

Upon the circulation the action of paraldehyde has been very thoroughly investigated, and the outcome of very numerous experiments and most extensive clinical observations has been to establish the *harmlessness of paraldehyde even in cases of disease of the circulatory apparatus.*

Upon the blood there appears to be no evidence of deleterious action so long as the doses are therapeutic ; with enormous toxic doses a spoiling of the blood, with development of methæmoglobinæmia, has been noted in animals, in particular in horses. In toxic doses in animals paraldehyde exerts a paralyzant effect upon the organs of respiration, but this is never even hinted at in the therapeutic employment of the drug, not even when the respiratory organs are affected by disease, *e. g.*, in emphysema, bronchitis, pneumonia, and phthisis.

Upon the organs of digestion, the drug has very little action, though many have anticipated an irritant action. Accordingly we may pre-

scribe it with impunity when this tract is healthy. Only in the severest forms of disease of the stomach can paraldehyde be regarded as contra-indicated.

Upon the kidneys there is no appreciable effect; if anything the remedy promotes the flow of urine and acts as a sedative to the urinary mucous tract.

Concerning the toxicology of paraldehyde, no undoubted case of death from a single dose is on record, though as much as twelve to thirteen teaspoonfuls and even more have been taken at one dose, *i. e.*, twelve to thirteen times the ordinary therapeutic dose. There is mention in the *Brit. Med. Journ.*, 1890, of death after six to seven teaspoonfuls of a paraldehyde mixture, but the case was one of enteric fever, and the proofs are entirely wanting, according to Bumke, that paraldehyde was the undoubted cause of death.

Mackenzie (*Virchow-Hirsch's Jahrb.*, 1891, i) records the enormous dose of $3\frac{1}{2}$ ounces with recovery after very pronounced toxic symptoms—stupor, insensitiveness of the pupils, lividity, hurried pulse and breathing.

Chronic intoxication may arise if the use of the drug is long persisted in, but the occurrence is rare, and according to Bumke only ensues when large doses, *i. e.*, 30 grammes (seven to eight teaspoonfuls), are taken. The symptoms in these cases resemble the delirium of alcohol.

From the foregoing it follows that we have in paraldehyde a most valuable hypnotic suitable for all forms of sleeplessness with the exception of that caused by severe pain; that in the usual dose of 45—90 minims it rarely produces either by-effects or after-effects; that it is not contra-indicated by disease of heart or lungs or kidneys, or even of the alimentary tract except in very serious disease of the stomach; finally that to its administration there is no real impediment in the way of taste or smell. (We might add that any difficulties which might occasionally arise on the last count are at once overcome by ordering the drug in gelatine capsules.)

HARRINGTON SAINSBURY.

On the Treatment of Epilepsy by the Toulouse-Richet Method. (Psychiat., Neurol. Wochenschr., Feb. 28th, 1903.) Halmi and Bargaras.

The authors draw attention to the continuous arising of new remedies for and new methods of cure in epilepsy, and the as constant disappointment of our hopes which further trials of the new agents bring. In particular they make reference to the combined opium and bromide cure of Flechsig, which later developments and several recorded cases of death whilst under the treatment have brought into discredit. They point out that the epileptic seizures may, for various reasons, disappear for long periods—two to twenty-nine years, as the more recent statements of Sinkler make clear,—and the futility, therefore, of the attempts to demonstrate the curative value of drugs by observations extending over periods of three to four months, or at the most one year. In spite of these objections, however, they determined to make trial of the Toulouse-Richet method, so strongly had it been recommended.

As will be remembered, this method consists in the reduction of the chloride of sodium in the food (by an appropriate diet) during the time of administration of the bromides; the theory being that under these

conditions the bromide can substitute itself for the chloride of sodium in the tissues, and hence, by a more intimate contact, influence more powerfully the cell activities.

Fifteen cases were selected for trial. During a period of ten months these were subjected to bromide treatment with ordinary diet; during the two following months the bromide was withdrawn, the diet continuing unchanged; the Toulouse-Richet method was then pursued during one month; and then finally the patient reverted to ordinary diet and bromide for another seven months.

The results of these trials certainly do not prove the value of the method; they may be described as negative. But then the lines of the experiments do not appear to us to have been very judiciously laid down. Why the two months' period of complete withdrawal of the bromide before commencing the Toulouse-Richet method? This must of necessity have disturbed the balance reached during the bromide and ordinary diet period, with the result that the effect of the hypochlorised diet of the Toulouse-Richet method did not come in direct juxtaposition to the ordinary diet period, though this was what we wanted. Then, too, why the short period of the Toulouse-Richet method? This is meaningless. The periods should be of equal duration. Two of the fifteen cases selected for observation died after the commencement of the Toulouse-Richet method, but also after this treatment had been abandoned; in the one case there had been thirteen days of treatment, in the other seventeen days. It does not appear at all clear that the method had anything to do with the death. Somewhat illogically, so it appears to us, the authors, whilst denying any curative value to the method, admit that it does develop the action of the bromide; indeed, they ascribe the two deaths to this over-action. But unless they are prepared to deny any therapeutic value to the bromides this admission asserts all that MM. Toulouse and Richet have claimed, *viz.*, that the activity of the bromides is heightened by the withdrawal of salt from the dietary. This is their teaching, and their recommendation is to *reduce the dose of bromide* when passing from a full saline dietary to a hypochlorised diet.

HARRINGTON SAINSBURY.

Pseudo-epilepsies and the Relief of Some Forms by Thyroid. (Journ. of Nerv. and Ment. Dis., Oct., 1902.) Browning.

The following are some of Dr. Browning's conclusions:

1. "In the young there occurs a class of cases characterised by recurrent attacks of heterogeneous type, and that may conveniently be called pseudo-epilepsy."

Our comment is that to give a name to anything so nondescript as his class of cases would be most unwise.

2. "This form is curable."

But we must add it is so nondescript that the fear is that it will never be diagnosed.

5. "Troubles of this kind, when due to rachitis, are amenable to thyroid treatment."

That will be unexpected, inasmuch as thyroid is not a recognised treatment for rickets.

These three from among his seven conclusions we may quote. They are not at all satisfying ; but, indeed, the whole paper appears to us most inconclusive.

HARRINGTON SAINSBURY.

5. Sociology.

Juvenile Murderers and Homicides [Ueber jugendliche Mörder und Todtschläger]. (Arch. f. Kriminalanthropologie, Bd. xi.) Baer.

This paper is one of the most notable contributions of recent years to the anthropological and psychological study of the juvenile criminal. It is based on careful observation of a series of twenty-two youthful assassins who were under the author's care for considerable periods of time in the Plötzensee Prison at Berlin. Full notes are given of each case, comprising a history of the crime, the personal and family antecedents of the criminal, his physical and mental condition, with anthropometric details, and, in most of the observations, with good photographs of the individual at different ages. The main facts brought out by the inquiry are then summarised, and their bearing on various problems of criminology is discussed with that union of thoroughness of method and breadth of view which invariably distinguishes Dr. Baer's work. A paper of this scope and character cannot, of course, be adequately treated within the limits of a short notice, and the present *résumé* does not aim at more than indicating a few of its salient points.

Of the twenty-two murderers, three were aged 14 to 15 years, three 15 to 16, eight 16 to 17, and eight 17 to 18. Only six of the cases were crimes of passion—revenge, jealousy of comrade's success, etc. In three others the motive was to gain a change from reformatory to prison ; and in the remaining thirteen the object was robbery. In nearly all the instances the crime was of a very revolting brutality, so that the series may be fairly taken to represent juvenile delinquency at its worst. It becomes, therefore, a question of interest whether these criminals presented the anatomical characters supposed by the Italian school to be distinctive of the "*reo nato*," and more particularly of the assassin type. The author's answer is unhesitatingly in the negative :—"Neither in the general formation of the skull, nor in that of the face and the rest of the skeleton, could any peculiar characters be detected showing a specific deviation from the normal condition of development of individuals of the same age, belonging to the same race and social class." In many of the cases, no doubt, physical stigmata of degeneracy were present, but they were not different in kind, degree, or combination from those met with in the non-criminal degenerate.

In these youths, as in all classes of criminals, intellectual and affective anomalies were frequent and well marked. In ten instances the mental condition was one of pronounced defect ; and at least five of the other cases had episodic attacks of depression with suicidal impulses. Two of the prisoners became insane after some years' imprisonment ; and in

this connection Dr. Baer points out that the psychoses which develop about puberty, though they may not present definite intellectual symptoms before the seventeenth or eighteenth year of age, often induce disorders of conduct several years earlier.

Absence of moral feeling was noted in nearly all the cases, but, as the author remarks, it is not always easy to say how much of this defect is due to congenital feebleness of brain and how much to the influence of bad training. And a somewhat similar reservation, he adds, has to be made in regard to many of the physical anomalies met with in such cases. Very often they are to be viewed not as the expression of a congenitally defective organisation, but as the result of bad hygienic conditions during the period of growth.

In common with English and French observers, Dr. Baer notes that the worst cases of ethical defect, as shown by the brutal character of the crime and the total absence of remorse, are found in the town-bred youths. A vicious sexual precocity appears especially to characterise these young criminals of the big cities.

As regards the effects of treatment and the ultimate prospects in these cases, Dr. Baer is not optimistic. In only two or three instances was there any real raising of the intellectual and ethical level. The only rational treatment, the author holds, is that of the reformatory for an indeterminate period, preferably in institutions of the farm colony type. But he considers that in many cases no permanent results can be looked for from that or any other method; it is, in fact, necessary to recognise the existence of a class of incorrigible criminal defectives who are unfit for free life, and must, in the interests of society, be kept under restraint indefinitely.

W. C. SULLIVAN.

The Mental Examination of Accused Persons [L'examen mental des prévenus]. (Bull. de la Soc. de Méd. Ment. de Belgique, Feb., 1903.) De Moor.

Dr. de Moor, in his presidential address to the Belgian Society, in view of the well-known fact that insanity is often overlooked in the law courts, urges the importance of judges being able to acquire, as at Heidelberg University, some knowledge of the mental condition of criminals, and of diseases of the mind generally. Moreover, he would reserve the mental examination of accused persons or prisoners to medical men with special diplomas. The selection of a lunacy expert should always be granted to the defence in a trial. In important cases he is in favour of two experts giving evidence, one of whom should be chosen by the defence; in case of their disagreement, the magistrate, with the consent of the defence, could select a third expert, whose decision would be practically final. In some cases, it is highly desirable that the accused should be placed under observation in an asylum for a limited period (the German law fixes this limit to six weeks). Such a sojourn by a special enactment could be made without prejudice to the accused. In addition to giving correct information concerning the mental condition of the accused (detection of simulation, etc.), such a period of observation in an asylum would turn out to be of real benefit as regards the treatment of the really insane. In exceptional cases the six weeks of

observation granted by German law might be extended by permission of the magistrate upon request of the defence. Dr. de Moor in this address does not pretend to deal fully with this question, but merely makes a few suggestions well worth consideration. H. J. MACEVOY.

Social Venereology [Vénérologie Sociale]. (Le Progrès Médical, April 11th, 1903.) Clado.

This is a most thoughtful paper, of the greatest interest, on the question of the prevention of the spread of venereal diseases, and well worth close study. It is only possible here to give some of the author's conclusions and suggestions. A careful examination of evidence (statistics, etc.) shows that prostitution is the cause of the spread of venereal diseases; that clandestine prostitution is answerable for quite two thirds of this; that in three quarters of the cases a woman prostitutes herself before her legal majority; that prostitutes are generally recruited among girls seduced and abandoned; etc. It therefore follows that the great source of venereal diseases arises from the clandestine prostitution of young women; moreover that man is particularly responsible for its spread. The protection of the young woman against seduction is of the first importance, and it is especially in this connection that the prophylaxis of venereal diseases becomes a social question. The error of those in favour of "regulations" is that they have dwelt particularly on the fact that the diseased prostitute is immediately much more dangerous than the diseased man, losing sight of the not less evident fact that the best means of avoiding the evil would have been to protect her against the man who contaminated her.

The author divides his work into three parts. The first deals with the causes of the propagation of venereal diseases, especially prostitution; the second with the prophylaxis of these diseases (protection of minors, regulation of prostitution, therapeutic organisation); the third with extra-genital inoculation and its prophylaxis.

The majority of prostitutes first fall as minors, through seduction—most commonly between the age of fifteen and eighteen years, the age of sexual vulnerability in woman, as the author calls it, and it is against this that it is especially necessary to direct our efforts. Other causes contribute secondarily to favour the downfall of the young woman (faulty education, want of supervision, the licence of the streets, the ascendancy of the employer over his work-girls, the dangers inherent to the profession, the promiscuity of the poor, etc.); but there is one factor for which the law alone is responsible, and which concerns the man: that is the absence of penal measures (the author treats especially of conditions in France) calculated to cause restraint in his lust. In France especially we note this apparent contradiction,—that while the law considers marriage as one of the best social institutions, yet it accumulates obstacles to its accomplishment; for the rake has in his favour (a) the certainty of impunity in the seduction of a minor above the age of thirteen years; (b) the interdiction of the research after paternity; (c) the numerous obstacles to legal marriage (administrative formalities, professional difficulties—as in the case of soldiers, obligation to the consent of parents—for the man if under twenty-five years, for the

woman under twenty-one); (d) the absence of a law punishing breach of promise.

After discussing the immediate causes of prostitution as they affect women (sloth, vanity, want, etc.) and men (celibacy, conjugal continence, clandestine polygamy, etc.), Clado considers the accessory causes which favour venereal contamination—such as alcoholism, want of knowledge or initiation, the dearth of women, the long duration of venereal contagion (the latter made worse by defective treatment, fear of police in certain countries, prevalence of quacks, etc.).

When we approach the subject of antivenereal prophylaxis, the most urgent desideratum is the protection of young women, especially the prevention of their first fall. The author considers that there are four good means of obtaining the desired result—(1) punishment of the man convicted of seducing a girl below age, by forced marriage, prison, or a heavy fine; (2) detention up to the age of majority of a minor who prostitutes herself; (3) punishment of parents who connive at her fall; (4) punishment of the man who has relations with a minor, prostitute or not.

On the important question of the regulation of prostitution, the author contributes a mass of useful and weighty information. In Paris, for example, he shows that the system of consultations as carried on at the dispensary of the Prefecture is insufficient; that it is inefficient from the point of view of prophylaxis, and that it is in reality directly and indirectly dangerous to the public health. The prostitute does all in her power to avoid police supervision, and for very obvious reasons has a marked antipathy to the dispensary. "The system which goes by the name of regulation," says our author, "far from being opposed to the dissemination of venereal diseases, on the contrary favours it: firstly, because the compulsory attendance given to diseased women is insufficient as regards cure and inefficient as regards contagion; secondly, because on account of the regulations, clandestine prostitutes, by far the most numerous, avoid and escape this attendance." Another conclusion is that the prostitute, not being responsible for a venereal disease contracted willingly by a married man, and he alone being directly responsible for the contamination of his family, the measure of social preservation should be directed against the culprit,—that is, the man. Society has no right to imprison a diseased woman.

That the suppression of brothels does not lead to the increase of venereal diseases the author believes is shown by English experience (statistics of army, navy, etc., are quoted). The progressive diminution observed, on the contrary, can only arise from the diminution of the prostitution of minors, the great source of venereal disease—diminution due to the heavy penalties against seduction,—or from the liberty allowed to prostitutes, who, not being in dread of police regulations, go in quest of suitable treatment; or it must be due to these two causes combined.

On the subject of antivenereal therapeutics the author advocates the necessity of impressing its importance upon patients; of encouraging the opportunities of treatment. The treatment of syphilis should be gratuitous, at any rate to those who wish it; well-organised establishments should be accessible to all. That the actual organisation for the treatment of these diseases is almost uniformly bad or deficient is well

known. So great an authority as Fournier says that out-patient hospitals and dispensaries are perhaps sufficient for the treatment of *syphilitic accidents*, but badly equipped for the treatment of *syphilis*; that the consultations are irksome, inconvenient, humiliating, odious. And when we come to the conditions of in-patients, they are generally most unsatisfactory; scarcely anything is done to invite the unfortunate patients to be efficiently treated. Under several headings the author enumerates the necessary means of ameliorating and reforming the dispensaries and hospitals devoted to the treatment of venereal diseases—his views being almost unanimously shared by the distinguished specialists who met at the Brussels Congress. In the third part extra-genital contamination is discussed with its prophylaxis; and then follows a summary of the author's conclusions on the whole subject.

H. J. MACEVOY.

On the Care and Training of Young Idiots and Imbeciles [*Zur Pflege und Erziehung jugendlicher Idioten und Schwachsinnigen*]. (*Neurol. Wochenschr.*, Nos. 44, 45, and 46.) Krayatsch.

In three numbers of this weekly, Dr. Krayatsch, Director of the Asylum at Mauer-Oehling in Lower Austria, shows what has been already done, and what is farther proposed to be done, in Lower Austria for young idiots and imbeciles. By the census of 1890 there were returned, in a population of 2,800,000, 3000 idiots and cretins, of whom 400 were considered to be of a school-attending age. But Professor von Wagner, in his investigations on cretinism in Styria, has shown that in the year 1899 there were as many as 284 boys and 184 girls in institutions for the care and training of weak-minded children in Lower Austria.

Attempts to care for these feeble-minded children were conducted with but little spirit till the year 1896, when the institution at Kierling-Gugging was opened. Since then up to the end of June, 1901, 242 boys and 191 girls have been received.

The author gives the daily arrangement of lessons, and some statistics of the grades of idiocy, and the mortality.

In the third number he gives the sketch of a plan for a new institution for the care and education of feeble-minded children in Lower Austria. A scheme for the erection of a large institution for idiots in Lower Austria will be introduced into the Landtag by Mr. Steiner, who has already effected many reforms in the treatment of lunatics.

WILLIAM W. IRELAND.

Part IV.—Notes and News.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

THE General Meeting was held at the Langham Hotel, Portland Place, London, W., on Friday, May 15th, 1903. Dr. J. Wigglesworth, the President, occupied the Chair.

The following members were present:—Drs. J. Wigglesworth, H. H. Newington, H. F. Kidd, R. C. Stewart, A. N. Boycott, C. Mercier, T. B. Hyslop, C. H. Bond, W. A. Weatherly, H. G. Hill, J. M. Moody, H. Barnett, A. R. Urquhart, F. Watson, W. L. Andriezen, W. F. Menzies, H. E. Haynes, G. H. Savage, J. G. Soutar, G. E. Mould, A. J. Elliott, H. Stilwell, H. F. Winslow, T. O. Wood, M. Craig, W. Briscoe, H. T. S. Aveline, F. W. Edridge-Green, W. Douglas, G. H. Johnston, W. R. Dawson, James Chambers, D. Bower, G. E. Shuttleworth, R. J. Stilwell, G. S. Elliot, J. C. Johnstone, E. B. Whitcombe, J. B. Spence, H. Rayner, A. Miller, H. A. Benham, D. G. Thomson, J. W. Higginson, and Robert Jones (Hon. Sec.).

Apologies for non-attendance were received from Drs. A. R. Turnbull, P. A. Macdonald, and T. Stewart Adair.

Visitors.—Drs. S. Palmer, E. G. Younger, J. Marnan, and Mr. W. Schroder.

The Educational and Rules Committee met in the morning, and a Council Meeting was held before the General Meeting. The following were present:—Dr. Wigglesworth (President), H. Hayes Newington, Henry Rayner, Theo. B. Hyslop, C. K. Hitchcock, E. B. Whitcombe, W. R. Dawson, Rothsay C. Stewart, H. Gardiner Hill, Charles Mercier, A. R. Urquhart, C. Hubert Bond, Ernest W. White, Maurice Craig, J. Beveridge Spence, E. Braine-Hartnell, H. A. Kidd, A. N. Boycott, L. A. Weatherly, J. M. Moody, and Robert Jones.

The following candidates were elected ordinary members:—Bailey, William Henry, M.B.Lond., M.R.C.S., L.S.A., D.P.H., Featherstone Hall, Southall, Middlesex (proposed by Drs. R. Percy Smith, F. W. Mott, and Robert Jones); Eady, George John, M.D.Brux., M.B.Lond., M.R.C.P., M.R.C.S., L.S.A., Juglans Lodge, Enfield, Middlesex (proposed by Drs. David Ferrier, H. Hayes Newington, and Robert Jones); Johnstone, Thomas, M.D.(Hon.)Edin., M.R.C.P.Lond., Medical Officer of Health, Ilkley, Yorks (proposed by Drs. W. Bevan Lewis, W. Maule Smith, and Jno. Glen Forsyth); Wigan, Charles Arthur, M.D.Durham, M.R.C.S., L.S.A., Medical Officer, Bristol Training Ship "Formidable," Deepdene, Portishead, nr. Bristol (proposed by Drs. G. H. Savage, C. T. Ewart, and Robert Jones).

COMMUNICATIONS.

An adjourned discussion took place on two papers that were read before the previous General Meeting. These papers were:

(1) "The Care and Treatment of Persons of Unsound Mind in Private Houses and Nursing Homes," by Dr. Ernest W. White.

(2) "Lunacy and the Law," by Dr. T. Outterson Wood.

Dr. RAYNER said he did not hear the papers read, but he had perused them since in their printed form. The subject was one in which he had long been interested, and he therefore wished to offer some remarks upon it. There were two important points for discussion: first, the desirability of having early care of mental cases; and the second, that such care should be efficient. So far as the legalisation of treatment of early mental cases was concerned, he hoped that matter might be regarded as fairly well settled. When a Lord Chancellor had introduced the clause which he had into several separate Bills, it was reasonable to hope that when he tried a third time it would become law. But then there arose the question of making that privilege efficient. He thought there was great danger of that privilege being seriously abused unless some limitation were imposed upon its use. In his view, very considerable limitation would be necessary.

On what basis that limitation was to be fixed would be a point for discussion. With regard to the persons to take care of early cases, his experience had been that the best people were those who had had considerable asylum experience. Perhaps medical officers who had been for some time in asylums were the very best people under which such cases could be placed. Next in order were old asylum officers, not rank-and-file attendants. Beyond those he had found that ladies, who perhaps had had experience in nursing their own friends and had taken to the work, had turned out to be about the most efficient. On the other hand, his experience had been that general nurses were not good for mental cases. Unless such nurses had, early in their career, taken to mental nursing, they turned out badly for the latter work; they were too stereotyped in their habits. He believed all alienists would agree that nobody without special experience should be permitted to take care of the most difficult cases now being considered. Such patients required a greater amount of tact and judgment than was called for in any class of medical work, and to put them into the hands of ignorant and, what was worse, prejudiced persons was most deleterious. He had seen men and women pose as having had experience in mental cases who had really done very serious damage to patients in a very short time, and perhaps almost permanently jeopardised their chance of getting well. In other cases he had seen people—qualified nurses of long standing—who had treated their patients with the utmost care and kindness, but at the same time with the greatest neglect, to the permanent damage of the patients. He had seen, in nursing homes, patients who had been kept in back rooms and allowed to be wet and dirty, and to masturbate to any extent, and yet who had been treated kindly all the time. Still, they had been very much neglected. He had seen cases of delusions relegated to bed, where their delusions became stereotyped and fixed. In fact, in those cases there had been extreme neglect of a very kind form. Therefore he thought the main point to consider was how to make treatment of slight mental disorders good and efficient, to shut out not only the absolutely incapable, but also people who were likely to treat cases on wrong lines. That required a great deal of consideration, both as to how the limits were to be set, and as to who was to set them. He did not know whether the Commissioners in Lunacy might be inclined to grant licences to people who should take charge of cases, but his own feeling was that the Medico-Psychological Association, which had done so much in the direction of improving the training of attendants in asylums, might set itself to work by examination, and perhaps also by teaching, to furnish the public with a reliable body of people who could have charge of cases of incipient insanity. He would be very glad if, as a result of that discussion, some definite proposition of that kind came before the Association.

Dr. WEATHERLY (Bath) said all were delighted to hear the very lucid papers of Dr. White and Dr. Wood at the last meeting at Derby, more especially as time did not permit of the proper and full discussion of the paper brought before the Society by Sir William Gowers earlier in the session. At that discussion nearly all the speakers seemed to preface their remarks by saying they knew nothing about the subject of which they were about to talk. During thirty years he had worked among the insane, and the first fourteen of them were devoted to a great extent to the private care of the insane in private dwellings. It would be remembered by members of that Association that in 1880 he read a paper before them on the question, which was discussed at two meetings. Later he had the privilege of publishing that paper as a book, and was honoured by being allowed to dedicate that book to one whose name was revered by all, the late Earl of Shaftesbury. His lordship saw that book through the press, and had a great amount of correspondence with him on the subject. In that book he (Dr. Weatherly) brought forward a proposition to make the system of single treatment of the insane a definite legalised system, such as Dr. Rayner had just suggested; *i. e.*, to eliminate people who simply took patients into their houses without any special knowledge of mental disease, or the treatment of it, for so many pounds, shillings, and pence. He suggested in that paper that suitable people should be allowed to take one or two cases; that they should work by licence, not granted by the Commissioners, but by their petty sessional divisions, as against quarter sessional divisions, because one recognised that petty sessional officers would know more about the people in their small area. He thought it might be of

interest to the meeting to read one of the letters of the late Earl Shaftesbury on the subject. His lordship said: "I do not object to the principle—I see the good results of it in many aspects; but I somewhat doubt the possibility, should the system be extended to the degree you propose, of exercising such an accurate, constant, and vigorous inspection as would prevent a recurrence of the horrible abuses that prevailed in former days. You may judge what I feel on the subject by the evidence I gave before the House of Commons in 1859, when I stated that 'were any relative of mine afflicted by insanity, I would place him or her in a house along with many others, in preference to any retreat for a single patient.' You will reply, perhaps, that your plan involves the superintending care of a medical man; nay, but I answer, the very worst cases in my knowledge were those where medical men had both the sole care and whole profit of the patients committed to their charge. Nevertheless the wisdom and experience of good men may invent some mode of discipline and superintendence whereby the scheme you propose may be rendered as safe as any other. Of course, such a plan as yours can be intended only for the comparatively rich, inasmuch as the vast mass of those who can barely afford a guinea a week, or even twice that sum, for care and treatment, must, of necessity, be excluded. Almost all reformers in lunacy matters, whether they be lay or professional, are so carried away by the claims of the patient—a natural and very commendable feeling—that they totally forget the claims of the public. The patient has every claim to care, comfort, curative treatment, and his freedom as soon as he is well; but the public have a right, on their side, to security from danger, annoyance, and the pressure of intolerable burdens. I do not say these things to discourage inquiry—much will be gained by frequent discussion,—I am only anxious that nothing should be propounded hastily. The public are so sensitive on the subject of real or alleged madness, that they fall into fits of ecstasy at every new scheme that is brought before them." Those were the words of one whose name would always be loved by all who were devoting care and time to the treatment of the insane, however one might disagree with some of his propositions. What he felt very strongly when Sir William Gowers read his paper was, that that gentleman apparently wanted it possible to place people under care and treatment without, apparently, any supervision whatever; that the relatives might be able, without what he described as the stigma of certification, to place their patients with Jack, Tom, or Harry to be treated. He thought Sir William Gowers forgot that a large majority of the patients who were sent to private houses were not sent with their free will, but against it; they were practically compelled to go to those places, and therefore were virtually made prisoners. He (Dr. Weatherly) thought something should be done to legalise the detention of every person suffering from mental disease and their treatment in single houses. He was most emphatic on that point. With regard to Dr. White's remarks as to the suitable cases for private care, he would not dream of attempting to state what cases, in his opinion, were suitable for private care. It depended to a very large extent upon the person under whose care and treatment the patients were being placed. Looking back he could recollect cases where a widow, perhaps, and her two daughters had devoted themselves so absolutely and entirely to the care of the patient placed under them that he did not think that patient could have been placed anywhere better, though the cases were probably those which Dr. White might not have thought suitable for private treatment. But he had also seen cases where single care was most appropriate, but where the patients had been placed under the care of people who had no idea of managing them. He thought each case should be taken on its merits. The next question which should be considered was whether the care and treatment of the insane should be so wholly relegated to anybody, whether they had or had not special knowledge of the care and treatment. He was not simply referring to lay people, but to medical men themselves. He thought it monstrous that medical men and judges should stand up and say that ordinary people were quite as capable of judging of the mental condition as were men who had devoted their whole lives to the care and treatment of the insane. Surely one who had anything the matter with his eyes would go to an oculist who had devoted his time to that special study; and in the case of mental disease it stood to reason that those who had devoted their lives to such cases must know more about them than the ordinary man. If in any way a system could be established whereby a medical man engaged

in mental work would be able to have a patient under care in a house away from an institution, whether public or private, it would be a very great help. Another point which was touched upon by Sir William Gowers, and also by Dr. White and Dr. Wood, was that of voluntary boarders. He (Dr. Weatherly) thought the voluntary-boarder system should be very widely extended. It should undoubtedly be extended to those public asylums which were now doing good work by taking private patients. He would insist upon such asylums having a definite department apart, and a definite dietary for those private patients. But he thought the voluntary-boarder system should be brought into touch with those asylums. It might be said that he was speaking on behalf of licensed houses when he said it was a wrong thing in the Act of 1890 to include the voluntary boarders on the licence. If an institution could get and keep voluntary boarders, and get them well, while keeping them comfortable, those boarders ought not, in his opinion, to count on the licence. Many houses would be willing to add to their buildings, to provide an annexe for voluntary boarders if they were not included in their licence. And very likely the institutions would do more good work in curing those people by association, by general discipline, and the *morale* of the institution than could be done under single care. He trusted that there would emanate from that discussion a suggestion that the whole system of voluntary boarders should be more or less widely extended.

Mr. BRISCOE said that Dr. White's paper was, in his opinion, a remarkable one, and the question might be regarded as a national one, almost as much so as the abuse of the practice of bloodletting was in former days. He said it had occurred to him that a resolution somewhat similar to the following would be a proper one to adopt in the circumstances:—"That this Association disapproves the modern system now being practised with regard to single care and private nursing homes, and we would suggest to the law authorities some stringent methods with regard to the better regulation of single care cases, nursing homes, and other places for persons of unsound mind; and, in particular, we would lay stress on the important fact that the caretakers should be specially qualified on the matter, possessing psychological training and knowledge." That was only a rough idea, but it was probably similar to what was in the minds of most of the members.

Dr. BOWER said all would agree with that part of Sir William Gowers' paper which said that something must be done to allow of the treatment of certain cases in private houses instead of their being sent to asylums, and, as Dr. Hayes Newington pointed out at the meeting at which Sir William Gowers' address was delivered, the Association had taken all the steps it possibly could to get the Scottish provision inserted into the new Act. On the other hand, he (Dr. Bower) thought it necessary not to make it absolutely a matter of free trade, the treatment of lunacy and the boarding out of lunatics, and that some precautions, similar to those suggested in Dr. White's and Dr. Wood's papers, and by Dr. Rayner in his remarks that evening and also when Sir William Gowers read his paper, were desirable. He thought all alienists—he certainly did—saw many cases in consultation which could be treated at their own homes or in private houses. But he thought those private houses required to be very carefully looked after, and it was necessary that the homes should be very carefully selected. It happened that about a fortnight after the reading of Sir William Gowers' paper he (Dr. Bower) was looking out for a suitable private house, preferably that of a medical man, to which he could send a case which had been with him for some time, and which he thought would do better in a private house. Possibly he was unfortunate in the houses he went to, but in nearly every case the desire appeared to be to see as much of the patient's money and as little of the patient as possible.

Dr. DOUGLAS said he approached the matter under discussion from a standpoint somewhat different from that of most of those present. He had not approached the study of mental cases through the portals of an asylum, which in some ways was possibly a disadvantage, but it gave him a point of view which was of advantage, namely, that of the general practitioner and physician. Though he had not had what was commonly called an asylum experience, he had, from his earliest entry into the profession, taken a special interest in mental cases. He thought it was almost impossible, except in a very rough way, to generalise on the matter; every case should be judged on its merits. Doubtless there were many cases under private care which, if one took them separately, would do better in an asylum;

but one had no choice in such a matter. The friends of the patient would not agree to such a thing nor listen to it. He saw no objection to some form of certificate showing that there must be some special knowledge (on the part even of the medical man) of mental cases before he could take up the care of private patients. There were many medical men who were not suitable persons to have care of private cases; one had heard the acknowledgments of medical men that they knew nothing about the matter, and there was a good deal of evidence to the effect that they did not. He thought there was no objection to leave the matter to medical men who could show special knowledge of mental cases. There were many non-medical people—women, for instance—who might be very suitable persons to place a patient under; that must be judged by the person and by the case—there was no other way, so far as he could see. There was every prospect that when the next Bill became an Act the Scottish clause would be introduced. A proposal had been made somewhat different from that, that there were persons who could not be considered as sane who were not able to look after their property, but who might have freedom to go where they liked and be at liberty when they liked. He admitted there was something to be said for that, but he would not give any such case freedom to go where he liked. The point was a very difficult one, and he ventured to suggest to the special joint committee on the subject that where there was no parent or elder brother or sister, as the case might be, some one who could occupy the position *in loco parentis*, there should be a guardian who would at least have certain power and influence over the patient, and be to a certain extent responsible. A day might come when, either through a weakened will or strong temptation, those patients might show undoubted signs of insanity, and the alienist should be prepared to deal with that condition. No doubt it was a very difficult thing to put into an Act of Parliament, but he did not think the difficulty should prove insuperable. He regretted the Committee could not see their way to frame a clause which would give effect to that idea; he was not without hope that they would yet do so.

Dr. SAVAGE said he felt some hesitancy in speaking on the present occasion, because, at the original address by Sir William Gowers, he spoke fairly fully. Unfortunately he was not present when the two most excellent papers were read by Dr. Ernest White and Dr. Outterson Wood. He spoke very much from the same point of view as Sir William Gowers did, though perhaps with a larger experience and practical knowledge. One came to the point that, do what one would, one had to face the fact mentioned by Dr. Douglas, that a large proportion of the friends would not have their relatives certified, and till they could be forced, by a kind of police action, to certify against their will, something must be done, and it seemed to him that something should be done in the way of recognising single homes. There he agreed with the speakers that day, that it was of the utmost importance to have a notification of patients and a kind of notification of homes. That day he sent out, at the request of a medical man, his 2078th regular form for applicants who wanted to have patients in their houses. Therefore there were on his list 2077 people more or less qualified. When he told his hearers the qualifications of some they would be able to judge. A parson's wife wrote to say, "Unless you can send me a patient to pay £1000 a year, and cause no trouble, my husband will have to put down his carriage, as he has lost heavily on the Exchange." That was the sole qualification. Another thing, which he had spoken very feelingly about, was that people thought every medical man was qualified. Many of the doctors who applied to him had had some experience of the insane; some had been resident medical officers, but in many cases their houses were totally unfitted for receiving mental cases; they were semi-detached in a High Street, with no gardens. Then there was another important point. He frequently said to a doctor, "I do not know your wife." That was one of the most important things. He had had the following experience. He had sent a patient to the house of a doctor who had had training. His wife drank, and the consequence was that great troubles arose, and in the end the patient was removed. Because he had allowed the patient to go into single care the remark was made, "Doctors are no good, we will have a nurse, and run our own risk; we will take her away." They did so, and the patient committed suicide. It was necessary to select the people to have charge of single cases with the utmost care, and to see that they had had some special training. There was need

for a permission of some kind; whether it should be permission by magistrates he could not say. He felt that registration of houses and notification of cases would, to a great extent, cover the ground. There would be trouble, as every one recognised, but all felt a tendency towards greater freedom in the treatment of patients. Every case should be looked upon individually, not only from the point of view of his disorder, but from that of his relatives and his home. The next thing he thought members would all agree upon, but about which nothing had been said that day, was that one felt the Association would urge, as far as it could, the increase in the number of Commissioners, for it was absolutely ridiculous to expect the Commissioners, let them work as hard as they might, to do more work than they did at present. Therefore if there were to be registration and notification they would not be able to take it up. He was quite sure that all of them, especially those who were acquainted with consultations in general practice, encountered many patients who ought to be certified, but who yet could not comply with the requirements of the certificate in respect of what could be seen at the time of the interview. He signed a certificate that day. There were no facts indicating insanity at the time, but he made an assertion that the man was suffering from "acute mania," that he was defective in self-control, loquacious, loud, and turbulent of tongue. That alone was not enough to indicate that the man was necessarily insane. Still, as he was a dangerous lunatic, unless one took the bull by the horns and acted in that way, danger to society would arise. Therefore, besides giving freedom in the treatment of patients, one required that there should be an extension of certification.

There was one other point, and one which constantly annoyed him. One was inclined to think that one's professional brethren intended to be honest in what they said, but he was sick of hearing the following:—A patient was sent into a county asylum or a private asylum as a general paralytic; and the doctor said to the friends, if the patient had been put earlier under his care it would have gone better with him. There were equally hopeless cases of dementia præcox, which began with so-called hysteria, and were as certain to end in weak-mindedness as general paralysis was to end in death; and it was nonsense, and it was wicked, if ~~it was~~ one man throwing a slur on the reputation and honour of another to say, "If this patient had been sent to me sooner I could have done more for him."

Dr. EDRIDGE-GREEN wished to refer to one point which, at the meeting when Sir William Gowers' paper was read, was laid stress upon by those who did not belong to the specialty, namely, that a person by being certified became a lunatic, and was thereafter permanently known as such. But there was no doubt that in this case, as in other things, the very means which the public took to avoid certification brought about the result they wished to avoid, because in many cases the public would make their own diagnosis. One heard over and over again, "Yes, Mr. So-and-so was a raving lunatic in that house," and the report kept much more permanently to the man than if he had been sent to a large or small institution, care being taken to transfer him quietly to it. It was for that reason that recurrent cases came back repeatedly to asylums, the statement made being that they found people were making remarks about them.

Dr. ALLIOTT wished to make a few remarks as a general practitioner, who had been engaged in the personal treatment of mental cases for twenty years, and had since given up that branch of work. He had heard with a good deal of surprise that the majority of patients who came under the care of private practitioners came there against their will, and suffered a sort of imprisonment. Perhaps he was the exception proving the rule, but he was happy to say that, during his twenty years' experience, the patients had come to his house voluntarily. He had been impressed by Dr. Savage's question, "If those border-line cases were not treated in private houses, where were they to go?" The evidence of certifiable insanity in such cases was to seek, and up to the present he had been unable to find it. The patients had come willingly, and, as Dr. Savage remarked, he did not know where else than to such homes they could have gone. In the hope, frequently justified, that they would get better, the friends were averse to certification. With regard to the stigma which was supposed to rest on the patient and his friends, and referred to by Dr. Edridge-Green, with whose remark he did not quite agree, he could not help seeing a very great difference between the person who had been under certification and the person who had not. Speaking as a

general practitioner, he could say it made 'a great deal of difference. Dr. Edridge-Green had referred also to patients being sent away to an asylum, so as to escape a public branding with lunacy. He did not think the going away to a private asylum had that degree of privacy which those connected with such institutions were apt to imagine. He heard with great regret, at the last meeting, of the very large number of people who were incompetent to take charge of private patients. Happily his experience had not been of that sort, and he hoped such instances were the exception and not the rule. He had only seen kindness, and some amount of skill, on the part of doctors who had charge of private patients. It seemed to him that in private care there was an opportunity of giving personal attention to the cure of the patient, which was not so possible when there were a number of patients together. Of course in the latter case patients could get entertainments and dances, which were most excellent; but he thought some patients were more readily helped where they could receive individual personal care. He would be the last, from his personal acquaintance and knowledge of them, to make any criticisms but the most favourable on those valuable homes, the private asylums, but he thought there were a large number of patients not suitable to be sent to asylums, and not certifiable, but yet not fit to take care of themselves. He spoke from that point of view, and because he was surprised to hear it said that many patients sent under private care were imprisoned, taken into the house by the back way, and then locked up. He said he was one of those whose experience was contrary to that.

Dr. HENRY WINSLOW said that the first consideration which alienists ought to have, and probably did have, was, what was for the good of the patient? How was he to be got well, and what was the quickest means of accomplishing that? Was that to be done by sending a patient, say for trial, for a certain time to a private house or private home, or was the patient likely to be benefited more by going to a public institution where he or she could be thoroughly looked after by experienced persons? His own observation and belief was that they could derive a vast deal more benefit by being placed as early as possible under the care of those who had had considerable experience in institutions, either private or public, or in hospitals. It seemed to him almost unreasonable to expect that persons who had not had considerable experience in the management of insane patients could be expected to exercise that supervision and that care which were so absolutely necessary, more especially in the early stages of insanity. There were, no doubt, cases which were fitted to be taken care of in private houses; he alluded especially to the chronic cases. He saw no reason whatever why a chronic lunatic should not be put into a private house. Such patients were capable of some enjoyment of life, and many of them were quite harmless, and could go about with only a moderate amount of supervision. But to put a case of early insanity, when it was not quite clear what course it was going to take, into the hands of a general practitioner, or a person unacquainted with insanity, was, to say the least, a most hazardous thing to do. He thought all must have been impressed by the very large number of cases recorded in the daily press, of persons who were taken suddenly insane and were placed under general practitioners who knew very little about lunacy. The patients had slipped through their fingers and committed suicide. Hardly a day passed in which some such incident could not be seen recorded, and he regarded it as very deplorable. He thought persons who took charge of such cases, unless the patients were properly protected, ought to be held accountable to the law, because nobody was justified in taking charge of an insane person without exercising the very utmost supervision to prevent any catastrophe of that kind. He had himself seen cases of a similar kind, where men who were carrying on large general practices in London—he would not say from carelessness, but from want of proper supervision and proper knowledge and experience—allowed persons of that kind to get into trouble. The public view was that it was a misfortune for Mr. So-and-so to have taken his life, but about the last idea which seemed to occur to the general public was to ask who was to blame for it. Certainly the person to blame was he who had charge of the patient. The onus ought not to fall upon the attendants, but upon those who undertook the care of such cases, and who had not sufficient experience and knowledge to keep the patients safe. It was known that if the patient could be kept safe, even for a short time, there might be a perfectly fair chance of recovery. Anything happen-

ing to such a patient was a loss to society which ought not to be allowed to take place.

Dr. ANDRIEZEN said he had read Dr. White's paper very carefully, and agreed with most of its propositions. Several speakers had laid emphasis on the point that no hard and fast lines should be followed. As practical men they agreed that that was so. The general propositions laid down by Dr. White were, in the main, excellent and wise, and one could exercise one's discretion in departing, in minor respects, from any of them. One difficulty which he had found in his experience was the disobedience of relatives. One saw a patient who was suffering from slight maniacal or hallucinatory confusion, which one thought would last a certain time and probably prove dangerous; accordingly the relatives were advised that he should be certified. The relatives seldom followed the advice immediately, but they hesitated and hoped on, preferring to keep the patient at home, by means of which risks were run. Dr. Winslow had just drawn attention to the risk of suicide. During the past twelve months two cases occurred in his own practice which brought home to him seriously the importance of that. It would be wise if there were some legal provision by which a medical man who was called in to see a case of insanity, and who was satisfied that it was dangerous and required segregation, should have some means of notifying it, as in the case of the notification of infectious diseases. If some such notification were compulsory it would be better for the patient and for the medical man attending the case. He was particularly struck by Dr. Savage's remark about the medical ethics involved in the habit of giving rash opinions on the recoverability of such incurable affections; that remark ought to be made known to the profession at large. It was true that even in cases of general paralysis, the relatives were told that if the case had come under earlier treatment it would have recovered. He remembered two cases of the kind which passed through his hands and were sent to an institution, and in which the same remark was made. One boy he saw last year had dementia præcox, and subsequently developed mild maniacal excitement. It was a hopeless case from the beginning. Any one who had had experience of that class of case would know beforehand that permanent mental enfeeblement would follow, and that the intellect would be permanently damaged; but the relatives had been misled to believe that if the boy had been sent earlier to an asylum his breakdown would have been obviated.

Dr. HAYES NEWINGTON thought the Secretary had set before the Association a very large dish of debatable matter in putting forward the discussion on the Care and Treatment of Persons of Unsound Mind, and Lunacy and the Law. The two papers lately read, together with that of Sir W. Gowers read in November, raised the whole subject of lunacy. There was no doubt that Sir William Gowers, whether rightly or wrongly, was taken as wanting to tear down the provisions of the Lunacy Law too much, so as to allow of the treatment of lunacy cases in private houses, to an amount which exceeds that which the opinion of most members of the Association can endorse. There was no question that, if such was Sir William's aim, he wanted to do that which alienists knew from practical experience was wrong. Dr. White had contributed a very useful warning against going too far in that direction. He had proved to the public what most members of the Association knew, that if a bad case was taken and put into a bad house in the hands of a bad person, then very bad results would ensue. But at the same time it was known that there were cases which did very much better in good houses, in good hands, and beneficial results were more likely to follow than if they were sent to an asylum. But Sir William Gowers seemed to go further, for he desired some radical change in the law, and a very large change. There was no question about some change in the law being required. At present the law was being broken day by day, and one was told it would be broken because the friends of some patients would not have them certified, and we have to reckon with this determination. But that was not all—several patients were deprived of proper treatment because the law could not be observed. It was well known that the certificate required two considerations: (1) that a patient was of unsound mind; (2) that he needed detention. Members knew several cases, probably less among the acute than the chronic, where there was absolutely no necessity to detain a patient,—in fact, many of them, if they were well advised, went into houses voluntarily. For that reason the law must certainly be altered; he fore-

saw that if there was some relaxation in that way, not only would more people be tempted to put themselves under some care for their own benefit, but it would be much more difficult for the wrong-doers, those who took patients in the teeth of the law, to continue their practices. One hundred years ago people were sentenced to be hanged for the merest offence, such as the stealing of 1s. 1½d. from the person, or something of that kind. As a result, not one tenth of them actually were hanged, because the penalty was obviously too great for the offence. It was very much the same now with regard to certification. There were a certain number of insane patients in respect to whom doctors and friends objected to the certificates, because those certificates and the attendant formalities were too great a penalty for the mild alienation seen in the patient. Yet, according to the law, those patients could not be received into any house but an institution; it would be wrong for such a patient to be in that hotel where they were meeting now, for instance, because it was an offence for any person to receive for payment an alleged lunatic. But if one went further and endeavoured to put a foot rule on the Lunacy Law one would see the necessity for alteration. We discharge a patient not recovered but better, who had not got a home to go to. Where was he to go? He must not stop with anybody else unless as a free guest, otherwise it would be a breach of the law. That might appear a small view to take, and might seem to be straining a fact, but it was not so. It would be remembered that two years ago a householder was brought before Sir Frederick Lushington, at Bow Street, for chastising a brother of weak mind with the cane, and in other ways ill-treating the patient. That was ill-treatment in the view of such an expert as Dr. Maudsley. However, the magistrate held that correction with the cane, under the circumstances, was not wrong, and he discharged the defendant. But the defendant was successfully prosecuted under the Lunacy Law five minutes afterwards for receiving his brother, without proper authorisation under the Lunacy Law, for payment, although, as a matter of fact, the keep of the patient cost £120 a year, of which the brother only received £100 a year. It made a great deal of difference to a medical man when considering a doubtful case whether he was liable to be prosecuted or not. He did not think alienists had any right, from their point of view, to limit in any way the treatment of patients. It could not be said at the present time that all patients could appropriately be treated under the present provisions of the law, and therefore the law should be judiciously extended to meet those cases.

Dr. ERNEST WHITE replying said: The excellent discussion of to-day has amply justified my paper. We all agree that some change of existing methods with regard to the care and treatment of persons of unsound mind in private houses and nursing homes is necessary, although we may differ as to what this change should be. Legal reform is urgently called for, and we must look to the Legislature to rectify matters. I will now refer to what we have heard to-day. Dr. Rayner draws attention to the desirability of early care and treatment under efficient safeguards, and especially dwells upon the fact that the custodians, medical and others, must be experienced. To Dr. Weatherly we are much indebted for the letter of that great humanitarian the good Lord Shaftesbury, which sharply delineates the defects of the past, and renders clear to us the possible abuses of the present and future. Dr. Weatherly has also alluded to the extension of the voluntary boarder system, which has been dear to my heart for some time past, and which was strongly advocated in my paper. I have had opportunities of seeing the working of the voluntary boarder system in well-managed private asylums, and sincerely trust it will soon be extended to county and borough asylums receiving private patients.

We have at the present time 240 private patients at Stone, and many of these might be treated as voluntary boarders preparatory to discharge. The main advantage, however, would be for the treatment of incipient cases. Dr. Savage has told us of his 2078 would-be custodians, all more or less qualified, probably a few more and the majority less, except it be that the standard of qualification is a very low one. I am much pleased with the suggestion of Dr. Henry Winslow, that the chief custodian should be held legally and not merely morally responsible for his patient. If culpable through inefficient care, whereby suicide or other accident might happen, he should be liable to prosecution. It is gratifying to us that Dr. Alliott has spoken from the other point of view, of single care uncer-

tified, for from personal knowledge of his patients I can state they have all spoken well of the care and attention they received, and of their comfortable surroundings when under his medical supervision.

And now to summarise. I believe we desire—

- (1) An extension of single care, certified or notified.
- (2) The registration of persons and houses receiving patients to ensure efficient custodians and suitable environment.
- (3) A licensing of these houses if necessary, with periodic inspection by deputy or district commissioners.
- (4) An extension of the voluntary boarder system to county and borough asylums receiving private patients, and an extension of the existing voluntary boarder system in private asylums, so that these patients shall be outside the fixed number of the licence
- (5) A voluntary boarder system for the cases received uncertified in single care and in nursing homes.

In conclusion I desire to thank you for the kind attention and support you have given me to-day.

Dr. T. OUTTERSON WOOD agreed with the suggestion of Dr. Weatherly, and supported by Dr. Ernest White, that the voluntary boarder system should be encouraged and made available for county asylums as well as licensed houses and hospitals for the insane, and that in licensed houses voluntary boarders should be notified to the Commissioners, but not included in the list of patients for which the houses are licensed as at present. He also strongly supported Dr. Henry Winslow in advocating the necessity for asylum-trained nurses for private patients as the best means of checking the large number of suicides which occur. The points he desired to especially mention were that for years the Association had been actively engaged in procuring special legislation for cases of incipient insanity. That certain forms of undeveloped insanity were suitable, and others unsuitable for single care, and should be differentiated. That asylum-trained nurses were necessary for mental cases, and hospital-trained nurses are useless. That unskilled care is wrong, and that the perfunctory visits of a physician cannot check abuses. That nursing homes should be registered and inspected. That all doubtful cases of mental disorder cared for by persons other than relations should be notified to the Commissioners, and that deputy Commissioners and local experts should be appointed by the Lunacy Board.

The members dined together in the evening at the Langham Hotel.

SCOTTISH DIVISION.

A meeting of the Scottish Division of the Medico-Psychological Association was held in the Central Station Hotel, Glasgow, on Friday, March 27th, 1903.

There were present Dr. C. C. Easterbrook, Dr. Graham, Dr. R. D. Hotchkis, Dr. William W. Ireland, Dr. J. Carlyle Johnstone, Dr. John Keay, Dr. J. H. Macdonald, Dr. Hamilton C. Marr, Dr. Parker, Dr. Alexander Robertson, Dr. George Robertson, Dr. James M. Rutherford, Dr. Thomson, Dr. A. R. Turnbull, Dr. Urquhart, Dr. W. R. Watson, Dr. Yellowlees, and Dr. Lewis C. Bruce, Divisional Secretary for Scotland.

On the motion of Dr. CARLYLE JOHNSTONE, Dr. Graham took the chair.

The CHAIRMAN thanked the members for again promoting him to the honourable position of Chairman. He said that since the last meeting of their Division one of their most respected members, Dr. Clouston, had passed through a very serious illness, and it would be a pleasure for them to learn that he was now convalescent and on a trip to more congenial climes for the recovery of his health. He proposed to send a congratulatory letter to Dr. Clouston on his recovery, expressly hoping that he would soon be back amongst them.

The SECRETARY then read the minutes of the last meeting, which were approved of.

Alexander Spalding Mackie Peebles, M.B., Ch.B.(Edin.), Assistant Physician, Perth District Asylum, Murthly (proposed by Drs. Urquhart, Bruce, and Mitchell), was elected an ordinary member.

EXPENSE OF REPORTING.

The SECRETARY stated that Messrs. William Hodge and Company had always reported for them at previous meetings, and the charge they had made was a very moderate one, viz. two guineas, including the expenses of the reporter. The reporting, however, of the last two or three meetings had been so heavy that Messrs. Hodge and Company did not see their way to continue doing the work at the same charge, and now offered that at future meetings their charge should be at the rate of 5s. per hour for attendance, and 1s. per sheet for the extension of the notes, with travelling expenses when required.

After some discussion it was agreed to leave the matter in the hands of the Secretary to make the best terms he could with Messrs. William Hodge and Company.

MEMBERSHIP OF COUNCIL—EXAMINERSHIPS AND DIVISIONAL SECRETARYSHIP.

The SECRETARY stated that the vacancies which had occurred were—a vacancy in the Council; a vacancy for the Examinership in Psychological Medicine; a vacancy for the Nursing Certificate Examinership and the Divisional Secretaryship. The Nursing Certificate Examinership, he understood, was in future to be held for three years by each Examiner, but that the Examiner was to be re-appointed annually, and, as Dr. Carlyle Johnstone had been appointed last year for the first time, he presumed that he would hold the Nursing Certificate Examinership for the next two years. There was a vacancy in the membership of the Council, and he had now to vacate the office of Examiner for the Psychological Certificate, having held it for two years.

Dr. TURNBULL proposed that Dr. Campbell, the Senior Assistant of the Crichton Institution, be nominated to fill the vacancy in the Council.

This was seconded by Dr. Keay, and unanimously agreed to.

Dr. HOTCHKIS proposed that Dr. Parker be nominated for the vacant Examinership, and on being seconded, this was unanimously agreed to.

Dr. TURNBULL moved that Dr. Lewis C. Bruce be again asked to fill the office of Divisional Secretary.

The CHAIRMAN thought there could be no doubt as to the propriety of this, and Dr. Bruce was unanimously re-elected as Divisional Secretary.

COMMUNICATIONS.

Dr. CARLYLE JOHNSTONE opened a discussion on the subject of Superannuation Allowances for Scottish Asylum Workers (see page 474).

Dr. LEWIS C. BRUCE contributed a paper entitled "Further Clinical Observations in Cases of Acute Mania, particularly Adolescent Mania" (see page 441).

After a vote of thanks to the Chairman, proposed by Dr. IRELAND, the meeting terminated.

SOUTH-EASTERN DIVISION.

The Spring Meeting of the South-Eastern Division was held by the courtesy of Dr. Harding at the Northamptonshire County Asylum, Berrywood, on April 23rd, 1903.

Among those present were Drs. J. H. Bayley, T. R. Beale-Browne, W. Harding, A. Miller, A. Newington, R. J. Stilwell, F. J. Stuart, J. Turner, T. Outtersen Wood, and Boycott (Hon. Sec.). Visitors: Rev. J. Cunningham, Rev. B. Mathews, and Dr. W. Miller.

The wards and grounds were inspected, and after luncheon a meeting of the Divisional Committee was held.

The General Meeting of the Division was held in the afternoon, Dr. Harding being voted to the chair.

Dr. J. TURNER gave a lantern demonstration in illustration of his article in the January number of the JOURNAL. He showed photomicrographs of the pericellular network surrounding the pyramidal cells of the cortex cerebri, and of the two varieties of nerve-cells (pale and dark) which are differentiated by his method.

Dr. F. J. STUART showed the brain of a microcephalic idiot, the right half of which (corresponding to left hemiplegia in the patient) was microgyrous, and was surface-marked on a plan totally different from the comparatively normal marking of the left half of the cerebrum, there being nothing to suggest a Rolandic fissure in the microgyrous half.

The minutes of the last meeting were confirmed.

Dr. A. NORMAN BOYCOTT was nominated as Hon. Divisional Secretary for 1903-4.

The following gentlemen were by ballot elected ordinary members of the Association:—Frederick Hudson Evans, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Herts County Asylum, St. Albans (proposed by Drs. Boycott, Kidd, and Grimmond Smith); Arthur Beresford Kingsford, M.R.C.S., L.R.C.P.Lond., D.P.H.(Camb.), 9, Burwood Place, Hyde Park, W. (proposed by Drs. Mercier, Boycott, and Grimmond Smith); Percy Houghton Stratton, M.R.C.S., L.R.C.P. Lond., Assistant Medical Officer, The Priory, Roehampton (proposed by Drs. Savage, Chambers, and Boycott); Herbert Campbell Thomson, M.D.Lond., F.R.C.P.Lond., Assistant Physician, Middlesex Hospital (proposed by Drs. Percy Smith, Chambers, and Boycott).

Drs. W. Harding, R. J. Stilwell, and J. Bayley were elected members of the Divisional Committee of Management to fill the vacancies caused by the retirement of Drs. Alexander, A. Newington, and Ernest White.

The name of Dr. F. R. P. Taylor was selected for submission to the Council for nomination to fill a vacancy upon that body at the next Annual Meeting.

The invitation of Dr. Rawes to hold the Autumn Meeting at St. Luke's Hospital in October, 1903, was unanimously accepted with great pleasure.

A hearty vote of thanks was accorded to Dr. Harding for his hospitality to the Division, and for presiding in the chair.

The members afterwards dined together at the Grand Hotel, Northampton.

SOUTH-WESTERN DIVISION.

The Spring Meeting of the South-Western Division was held at the City and County Asylum, Bristol, on Tuesday, the 28th April, 1903. There were present Dr. Benham in the chair, Drs. Eager, Baskin, Cotton, Blachford, Braine-Hartnell, Morton, Broom, Aveline, MacBryan, Miller, Rutherford, Marnan, MacDonald, Hon. Sec., Ligertwood, and Bullen. Visitors: Prof. Fawcett and Dr. Brown.

The minutes of the last meeting were read and signed.

Dr. John Marnan and Dr. Henry Broom were both duly elected ordinary members of the Association.

Dr. MacBryan's name was recommended for a seat on the Council, and it was resolved that Dr. Morrison and Dr. Turner should be elected to fill the two vacancies on the Committee of Management.

The Chairman stated that he had very much pleasure in proposing that their friend Dr. MacDonald should be elected their Honorary Secretary once more, and he referred to the excellent services which Dr. MacDonald had rendered. The motion was carried unanimously. Dr. MacDonald, in reply, thanked the members for re-electing him as their Honorary Secretary, and consented to accept the office for this year; but having now held it for ten years he wished to say that he thought the time had come when he would have to ask them to look out for a successor.

It was unanimously agreed that the invitation of Dr. Morrison to hold the next meeting at Hereford, in October, be accepted.

COMMUNICATIONS.

A discussion took place upon the paper read at the last meeting by Dr. Baskin upon "The Treatment of Phthisis in Asylums by Urea and its Salts."

Dr. Baskin brought with him a sample of the urea for the members to see,

He remarked that since the meeting in October last he had received a large number of letters from medical men throughout England. He stated that he did not know of any asylum—except the Devon County Asylum—where urea was being administered.

With regard to its administration he said the process was very clear, and was described very simply in his paper of October last. Pure urea was the best form to administer on account of its more pleasing taste and rapid solubility in ordinary media, water, etc., at ordinary temperatures.

With regard to results, he spoke of a few cases which had occurred at the Devon County Asylum; in two instances he was sorry to say death had resulted, but these patients were very far advanced in consumption. He thought that when urea was going to be administered it would be better to select the cases; in such conditions he thought the results would be satisfactory.

In conclusion he affirmed that it was perfectly clear that if experiments were not made no advance could be gained, and he suggested that his paper should receive their consideration.

The CHAIRMAN moved, and it was seconded and carried, that a vote of thanks be accorded Dr. Baskin for his able paper.

Dr. BENHAM contributed a paper entitled "Remarks on Suicides in Public Asylums" (see page 447).

Dr. J. V. BLACHFORD contributed a paper on "The Frequency of Occurrence of Granular Ependyma in General Paralysis" (see page 483).

Professor FAWCETT spoke of the great importance of the subject, and of the desirability of following up the matter, and expressed a hope that Dr. Blachford would carry his work very much farther, and he felt sure that by doing so it would result in great credit to the institution.

Dr. BULLEN congratulated Dr. Blachford on his excellent paper, and trusted that he would prepare, at some future date, another paper on microscopic investigations, which would be a most interesting subject.

The CHAIRMAN said that a valuable subject had been opened up, which he hoped they would not allow to drop.

At the conclusion of the meeting the Chairman said they all regretted to hear that Dr. MacDonald had been so ill and thoroughly run down. He could fully appreciate his position, because last year he himself was in a similar state of health. He understood that Dr. MacDonald was going to Switzerland, and he trusted that he would come back with all his old energy and vigour restored.

Dr. EAGER returned thanks, on behalf of the meeting, to the Chairman for his generous hospitality.

The members and visitors dined together in the evening at Stuckey's Restaurant, Bristol.

NORTHERN AND MIDLAND DIVISION.

The Spring Meeting of the Northern and Midland Division was held at Cheddleton Asylum, Leek, on the 30th April, 1903. Dr. Menzies occupied the Chair.

Members present: Drs. McLeod, Macphail, Miller, Menzies, Bedford Pierce, Rice, Rambaut, Sheldon, Torney, Trevelyan, and Hitchcock.

Visitor: Dr. F. Edwards.

The minutes of the previous meeting were read and confirmed.

Dr. MILLER proposed that Dr. Bedford Pierce should be recommended to the Council to succeed Dr. Hitchcock as Hon. Sec. to the Division, and expressed his regret that Dr. Hitchcock should have been obliged from ill-health to resign office. Dr. Bedford Pierce was unanimously appointed, and expressed his thanks to the Division for electing him. At the same time he asked for their cordial support, in order that the Division should continue to be a success.

Dr. McDOWALL, of Morpeth, having kindly invited the Division to his asylum for the October Meeting, the invitation was cordially accepted, and the Secretary was requested to endeavour to arrange the meeting for the first or second Friday in October.

COMMUNICATIONS.

Dr. TREVELYAN, Leeds, then read a paper on "The Permanence and Value of 'Dry Brain' Preparations," and he showed specimens. He expressed his preference for those preserved by Laskowsky's method.

In the ensuing general discussion Dr. MENZIES expressed the great obligation of the Association for the most interesting and instructive paper and exhibits. Dr. Menzies asked whether these dry specimens were of equal value to plaster casts of fresh brains, and whether there was likely to be unequal shrinking in the process of drying.

Dr. TREVELYAN replied that the shrinking was equal and general, and that he found real specimens which could be handled and pulled about were preferable to casts, especially for teaching purposes, as the student so obtained a much more memorable impression.

Dr. RICE showed a pathological specimen of a remarkably large aneurism of the cerebral artery, and gave a very interesting description of the clinical features which the case had presented during life.

The meeting closed with a hearty vote of thanks to the Chairman for presiding, and for his hospitality to the members.

THE INTERNATIONAL MEDICAL CONGRESS AT MADRID.

SECTION OF NEUROLOGY, MENTAL DISEASES, AND CRIMINAL ANTHROPOLOGY.

THE meetings of this section were held in the Royal Library and Museum under the presidency of M. José Maria Esquerdo y Zaragoza. A small room, in which were placed glass cases containing ancient manuscripts, was assigned to this section, and it was necessary to pass through a room occupied by another section in order to reach it. However, there were no paintings on the walls, as in some of the rooms devoted to the sections, to distract the attention. The first meeting took place on Friday morning, April 24th, when the president took the chair at nine o'clock. According to the general programme, which was handed to each member, ten reports and sixty-six communications were to be read, but it was impossible to carry out this arrangement, as there was not sufficient time allowed for it. No meetings were held on three afternoons; the reception by the King at the Palace on Friday, the Municipal Garden Party in the Buen Retiro Park on Tuesday, and the Royal Garden Party in the Palace Gardens on Wednesday took place about three o'clock, and, as every member of the Congress wished to attend these functions, it was of no use having a meeting of the section. In addition, Dr. Julian Calleja, the President of the Congress, wished to show the institution for epileptics of San José, which will be described later on, to as many members as possible, and the excursion there was fixed for Monday afternoon. Thus there remained only five mornings at which papers could be read from nine to twelve o'clock and one afternoon, and the consequence of this was that many papers had to be taken as read. One great defect in this, as well as in other sections, was that no notice was put up stating the subject of the paper that was being read and the name of the author, so that, especially when the reader of the paper was a Spaniard, it was impossible to find out what was going on. Every day a journal was published giving the names of the papers that were to be read in the different sections, but as they were not always taken in the order in which they were printed, much confusion was created.

Of the ten "reports," which were considered of more importance than the "communications," the most interesting were those (1) by M. Bianchi, of Naples, on a "Centre of Projection and Association in the Brain according to the Determinations of Actual Pathological Anatomy;" (2) by MM. Martinez and Lombroso, of Turin, on "The Intervention of Psychiatry in the Reformatory Treatment of Delinquents;" (3) by Dr. Galiana, of Madrid, on "Toxic and Infectious Insanities;" and (4) by Dr. Pregowski, of Heidelberg, on "The Affection described sometimes as Periodic Neurasthenia, sometimes as a Circulatory Psychosis." Eleven authors had sent abstracts of their papers in French, and these were printed and arrived about eleven o'clock on the first morning on which the section met. Dr. Galiana gave the conclusions at which he had arrived with regard to

mental degeneration and alcoholism, and respecting syphilitic insanity. Under the latter heading he considered the relation of syphilis to general paralysis, and said he was of opinion that general paralysis was not caused by syphilis. The only ground for his opinion seemed to be that he had seen cases of this disease in which there was no history of syphilis. Dr. Pregowski believed that the affection which he described was due to pathological modifications of the circulatory system, and more especially to spasm of the cutaneous vessels.

It is impossible to mention all the "communications," but some of them may be briefly noticed.

Dr. SUTHERLAND, Deputy Commissioner of Lunacy in Scotland, read a paper, which was illustrated by maps and diagrams, on the "Geographical Distribution of Lunacy in Scotland and Ireland." He thought that so many imbeciles under five years of age dying of neglect, injudicious feeding, and infectious disease in urban and rural areas accounted for the different ratios of insanity which prevailed in those areas. In the urban districts the ratio was 30 per 10,000, and in the rural districts 90 per 10,000. The mortality of children under five years of age was the reverse of this, being three times as great in urban as in rural areas.

Dr. GUTZMANN, of Berlin, read a paper on "Neurasthenia and Troubles of Speech," the latter being divided into (1) loss of memory and loss of the faculty of association of ideas, and (2) spasm or ataxy of the motor part of speech. The first class improved under the general treatment of neurasthenia, but the second must be treated by special exercises.

Dr. LEMOS, of Oporto, read a paper on "The Evolution of Delirious Ideas in some cases of the Anxious Form of Chronic Melancholia." Sometimes this form of melancholia turned into a special form of secondary paranoia, with ideas of negation, immortality, enormity, and grandeur, but the psychological processes in these delirious conceptions were not apparently always the same. Sometimes the ideas of immortality, of enormity, and grandeur of anxious melancholia closely approached the hypochondriacal delirium and negation which is ordinarily observed in these patients.

Dr. MANUEL IGLESIAS Y DIAZ, of Madrid, read a paper on "Pseudo-Criminal Lunatics in Spain," that is, persons who are insane and are guilty of legally punishable acts or omissions, and persons who become insane while before the courts or after conviction. About one fourth of the 472 cases which had occurred during the last five years were given up to their friends as guilty of minor offences, and the remainder were required by law to be kept in the ordinary lunatic asylums. There were, in the author's opinion, objections to this practice, and he preferred to have lunacy pavilions attached to prisons.

Dr. L. VON FRANKL-HOCHWART, of Vienna, contributed a paper on "Pseudo-sclerosis," and gave the history of a case which he had watched for eleven years. The patient, a man aged forty-two years, died of cancer of the stomach. At the autopsy the only lesion of the brain and spinal cord was the existence of a considerable number of granulations of Pacchioni. The author did not believe in the opinion held by the Charcot school that pseudo-sclerosis was a manifestation of hysteria. Pseudo-sclerosis resembled multiple sclerosis in many ways, but several symptoms which frequently occurred in the latter disease were very rare in the former affection. Mental affection, however, was often very marked in pseudo-sclerosis.

Dr. FLETCHER BEACH read a paper on the "Care and Treatment of Epileptics in England." The author said that although epilepsy had existed from the time of Hippocrates, the first institution for the colony treatment of epileptics in England was only built fourteen years ago. There were two classes of cases to be cared for in asylums or colonies, the insane and the sane epileptics. He passed in review the dispositions made by various authorities since 1874 to ameliorate the condition of the insane epileptics, and described the measures which many authorities propose to take in order to care for and treat them. With regard to the latter cases, he described the institutions at Maghull and Godalming, Surrey, and the colony for epileptics at Chalfont, to which he was one of the physicians, and mentioned that another colony for the care and treatment of sane epileptics was in course of erection by the Lewis trustees at Chelford, Lancashire. Dr. Bower, who was present, discussed this paper.

On Monday afternoon a visit was made to the San José Institution for poor epileptics who are not insane, imbecile, nor idiotic. It is situated some distance from Madrid on a large table-land, a considerable height above the level of the sea. It was founded by the Marquis of Vallejo, who gave a large part of his fortune in order to build an institution for epileptics in memory of his son, who died of epilepsy. The institution consists of eleven pavilions, five of which are used respectively as an administrative block, a chapel, a home for the monks who attend to and, if necessary, nurse the epileptics, a kitchen, and an infirmary, to which is attached an operating theatre, which was fitted up with the most modern appliances. The dispensary contained drugs of all kinds, not only for the treatment of epilepsy, but apparently for all kinds of diseases. Of the other pavilions, two are for boys, two for young men, one for those of faulty habits, and one for dangerous cases. In two of the pavilions there were schools and workshops, and in the basement of another there was a gymnasium. The institution is intended to accommodate 120 male patients, but at present there are only 55 in residence, some of whom are boys. The pavilions are separated from one another by plantations, but an unnecessary feature of the institution was a very high wall which surrounded the pavilions. In England this is not considered necessary, and as no patients were to be admitted if insane, imbecile, or idiotic there appeared to be no reason for it. The patients seemed to be well fed, and were happy and contented.

On the same evening the President of the section, who is the proprietor of the Maison de Fous, gave a banquet to the members of the section in the dining-hall of the institution. It is not, as may be imagined, an asylum for idiots, but a private asylum for the treatment of the insane. Bread is made in the establishment, and the cattle are put to death in a slaughterhouse fitted up for the purpose. Dr. Esquerdo possesses vineyards, and makes the wine which is used by himself and the patients. The writer of this notice had no opportunity of seeing the wards and dormitories, but he was informed by Dr. Macdonald, of New York, that the arrangements made for the patients were much inferior to those in use in English and American asylums.

The members of the Association may be pleased to hear that three of their number were made Honorary Presidents of the section. Dr. Wiglesworth, our President, whom the papers persisted in calling Ughiwerth, or some such name, was elected an Honorary President at the commencement of the work of the section, Dr. Sutherland was elected and took the chair after reading his paper, and Dr. Fletcher Beach was elected on the concluding day, and took the chair for two hours until called on to read his paper. During the time he occupied the chair, among other papers that were read two were by Americans, Dr. Hughes, of St. Louis, and Dr. Hoppe, of Cincinnati; the former's paper was entitled "New Views of the Virile Reflex," and the latter's "A Contribution to the Study of the Cortical Origin of Disturbances of Sensation."

SUPERANNUATION ALLOWANCES FOR SCOTTISH ASYLUM WORKERS.

MEMORANDUM SUBMITTED BY THE SCOTTISH DIVISION OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

1. Provision has been made by the Legislature for the granting of Superannuation Allowances to the Officers and Servants of the County and Borough Asylums in England. (53 Vict., Ch. 5, Sect. 280, 281, and 282.)
2. Similar statutory provision has been made in the case of the District Asylums in Ireland. (53 and 54 Vict., Ch. 31; also Loc. Gov. [Ireland] Act, 1898, Sect. 83 [13] and Sect. 84 [13]).
3. The Directors of the Chartered Asylums in Scotland are also empowered to grant Superannuation Allowances. (29 and 30 Vict., Ch. 51, Sect. 25.)
4. In other departments of the public service generally the Superannuation of Officials is provided for.

5. In the Scottish District and Parochial Asylums alone no Superannuation Allowances are obtainable by the Officers and Servants, however long and meritorious their services may have been, or however much they may be incapacitated by injury, ill-health, or other conditions arising from the nature of their employment.

6. The Officers and Servants of the Scottish District and Parochial Asylums have exactly the same kind of duties to perform, and they run the same risks as the employees in other Asylums.

7. Of all public employments, Asylum service is the most anxious and responsible, and the most dangerous to the health of both body and mind.

8. The omission from the Scottish Lunacy Acts of a satisfactory scheme of Superannuation Allowances for the Officers and Servants of the District and Parochial Asylums entails a peculiar injustice on a highly important body of public servants, for which they receive no compensation in the shape of higher salaries and wages or otherwise, their remuneration being such as to render it quite impossible for them to make adequate provision for old age or infirmity.

9. This exceptional and anomalous treatment of Scottish Public Asylum workers is not only grievously prejudicial to these individuals, but it is also opposed to public policy and detrimental to the best interests of the insane. It is in the highest degree necessary, for the efficient and successful administration of our Asylums, for the protection of the insane and the promotion of their welfare and cure, to secure and retain the services of the best possible officials, and to do all that is reasonable to remove any cause of discontent and restlessness. It cannot be expected that such persons will be induced to take up and continue in a line of work, in itself in many ways repugnant, unless terms are offered to them at least as good as those obtainable in other Asylums and in other public departments, which draw their recruits from the same class of people. As a matter of fact it is found extremely difficult to obtain the services of persons possessed of the qualifications requisite for the proper care and treatment of the insane, while the number of the changes which take place annually in the staffs of the Asylums is deplorable. It is believed that this very unsatisfactory state of matters is largely due to the fact that in the Asylums in question the employees have no prospect whatsoever of receiving annuities when they retire, worn out by the exacting duties of their calling, or incapacitated by the various accidents to which it renders them liable. The General Board of Commissioners in Lunacy for Scotland have frequently referred to this matter in their Annual Reports, and they have pointed out how prejudicial these frequent changes are to the interests of the patients in the Asylums. The General Board have long been, and still are, in favour of the provision of a scheme of Pensions for all Scottish Public Asylums.

10. Members of Parliament are respectfully invited to give this Statement due consideration, and they are earnestly desired to support in Parliament any measure calculated to satisfy the reasonable claim of Scottish Public Asylum Officials to be treated on the same principle as the Officials in English and Irish Asylums.

THE FOLLOWING MEMORIAL WAS, ON THE 16TH MARCH, 1903, AT THE REQUEST OF THE PARLIAMENTARY COMMITTEE, ADDRESSED BY THEIR HONORARY SECRETARY, DR. FLETCHER BEACH, TO THE SECRETARY FOR SCOTLAND.

I am requested by the Parliamentary Committee of the Medico-Psychological Association of Great Britain and Ireland to bring before your Lordship the subject of retiring allowances for the officers and servants of district and parochial asylums for the insane in Scotland, and to beg your Lordship's favourable consideration of the following statement.

It is a remarkable fact that these officers stand by themselves in the public asylum service of the United Kingdom in not having any prospect whatever of receiving annuities when they retire, worn out by the exacting duties of their calling, or incapacitated by the various accidents to which it renders them liable.

In the public asylums of England and Ireland some provision for the granting of pensions has been made by the Legislature, and similar provision has been made in the case of chartered or royal asylums of Scotland; but in the Scottish district and parochial asylums alone retiring allowances are not obtainable, although the workers in these asylums have exactly similar duties to perform and run the same risks as other asylum employees.

How trying and arduous these duties are, how numerous and serious are the risks which they entail, must be well known to your Lordship. The nature of asylum work is such that few can hope to continue in it for a prolonged period without incurring the hazard of mental or physical break-down, while the workers are also exposed to those dangerous assaults which are from time to time committed by homicidal and violent patients. I beg to draw your Lordship's attention to the following extract from the Report of the Select Committee of the House of Commons on Lunatics, 27th July, 1860:

"It would further seem desirable to reduce the time at which committees of visitors may grant superannuation allowances to their medical officers. Their duties are so peculiar, and such painful consequences are known to result from incessant intercourse with the various forms of this distressing disease, when prolonged for many years, that your Committee believe it would tend to greater efficiency if the period which stands at present at twenty years were reduced to fifteen." Although this recommendation is confined to medical officers, it is applicable with equal force to all others employed in the care of the insane.

Your memorialists venture to think that no argument will be required to convince your Lordship that the anomalous condition under which the great majority of Scottish asylum officials labour amounts to a grave injustice.

While this actual and relative injustice to a large body of individuals engaged in the public service appears of itself to call for a change in the law, it is urged that the interests of the community in general, and of the insane in particular, are likewise involved on the following grounds. Public economy demands that our asylums shall be so served as to secure the speedy and effectual recovery and restoration to civil life of all persons suffering under mental disorder to whom recovery is possible. Public sentiment insists on the care and treatment of all insane persons being conducted on lines which call for exceptional tact, intelligence, and temper on the part of the guardians of this afflicted and helpless class. It is obviously necessary that everything possible, that is fair and reasonable, should be done to obtain and retain the services of persons possessing these peculiar qualifications. In private administrations, which require special services, the first and principal step taken to attract suitable employees is to offer terms in advance of, or at least equal to, the average. In all other departments of public employment candidates are attracted and their services secured by the prospect of receiving more or less adequate retiring allowances. It may be said, without fear of contradiction, that no public employment is in its nature less attractive than the service of our public asylums, and that in no other service are the duties so frequently repelling or so dangerous to the health of both body and mind; while it is certain that the scale of wages and salaries at present being paid, or likely to be paid in the future, in the Scottish public asylums will not allow of their recipients saving out of them an adequate provision for old age or infirmity. The consequences of this prejudicial and imprudent treatment of Scottish asylum servants are easily discernible. Apart from the injustice from which many old and faithful servants have suffered and are suffering, it is found extremely and increasingly difficult to secure the services of persons fit to be entrusted with the responsible care and treatment of the insane, and the number of changes which take place in the staffs of the asylums every year is deplorable. The General Board of Commissioners in Lunacy for Scotland have repeatedly referred to this matter in their reports, and they have pointed out how prejudicial these frequent changes are to the interests of the insane. It is evident that they must be so, and every one acquainted with asylum administration knows how disastrous the results have been.

It is respectfully submitted that the omission from the Scottish Lunacy Acts of a satisfactory scheme of retiring allowances for the officers and servants of district and parochial asylums is detrimental to the efficient administration of these institutions, is prejudicial to the best interests of the insane, is inconsistent with

sound financial policy and public sentiment, and entails a grievous injustice upon a highly responsible and important class of public servants.

Your memorialists are conscious of the difficulties which stand in the way of effecting any statutory change such as is here suggested, but they feel confident that if their views have your Lordship's sympathy and support these difficulties will not prove to be insuperable. The addition or alteration of a few words in the existing statute would secure all that is now craved.

Trusting that your Lordship may find it possible to give a kindly consideration to this statement as made on behalf of a body which is peculiarly entitled to speak from knowledge and experience, I am, etc.

ASYLUM WORKERS' ASSOCIATION.

The Annual Report for 1902 shows that for the twelve months ending the 31st December, 1902, the membership comprised 119 Life Members, 119 Associates, and 4664 Ordinary Members, making a total of 4902, as compared with 4116 on the roll of 1901.

The Executive Committee point out that, on the strong recommendation of the sub-Committee on "Medals," they have been compelled to increase the minimum length of service for competitors for gold medals to thirty-five years instead of thirty as originally proposed, and for silver medals to thirty years instead of twenty-five.

This change has proved necessary in consequence of the unexpectedly large number of entries at the lower periods of service.

In accordance with a suggestion thrown out by Sir James Crichton Browne in his address at the annual meeting, a Reading Union has been established for the members, under the supervision of a sub-committee, who have drawn up a code of rules which it is hoped may be the means of placing the "Union" on a firm and permanent basis.

The "Homes of Rest" fund has aided seventeen applicants during the year, and the whole report shows that the Association is vigorous and flourishing.

LUNACY ADMINISTRATION IN VICTORIA.

Reference has frequently been made in these columns to the maladministration of the Lunacy Department in Victoria, chiefly owing to the division of authority and political interference. Thirty years ago a commission of inquiry recommended that the asylum staffs should be placed on a different footing from the other civil servants. Twenty years ago a similar recommendation was made by a Royal Commission, and every board of inquiry since has repeated the advice. Nothing has been done, however, and recently matters have culminated in a most complicated "asylum scandal," as the newspapers term it, and monstrous instances of political defiance of official experts. In April last one of the medical officers at Kew Asylum, whose name has been most mysteriously withheld, suddenly absented himself without leave and was found in a private hospital. His incapacity for his responsible position had been for some time apparent to his superior officers. He was granted three months' leave with the understanding that he would resign at the end of that time. When that time came, however, the Chief Secretary (the Minister at the political head of the Department) ordered him back to duty. The Inspector-General (Mr. J. V. McCreery) protested, and the Chief Secretary then suggested that the officer in question should be examined by a board of medical men. The inspector agreed to this, but the officer objected to the *personnel* of the suggested board, and the Chief Secretary finally asked Dr. Jamieson and Dr. Joske to report as to whether the officer was fit for duty. These two gentlemen are paid official visitors to asylums; it appears, however, that they were not asked to report in their official capacity, but to send in a

confidential report for which they were specially paid. There is a third official visitor, Dr. J. W. Springthorpe, but it appears the officer to be examined objected to him. Dr. Jamieson and Dr. Joske reported that the officer had suffered from a nervous break-down brought about by indulgence in alcohol, chloral, and other drugs, but that he had now recovered and might be returned to duty in a less responsible position. The Chief Secretary then, in spite of the inspector's further protests, gave a written direction that the officer was to be placed on duty as senior medical officer at Yarra Bend—the other large metropolitan asylum—and in just as responsible a position as at Kew. At this stage the inspector (Mr. McCreery) became ill and went on leave, and Mr. W. Beattie Smith became acting inspector. Dr. Springthorpe, hearing of the circumstances, determined to exercise the powers invested in him as official visitor by the Lunacy Act, and to institute an inquiry. The Act empowered him to compel the attendance of witnesses and to examine them on oath. At the inquiry he summoned Dr. Jamieson and Dr. Joske to give evidence. They protested, and insisted on taking their seats as members of the board of visitors, and asking questions of the witnesses. They both declined to give evidence. As the result of a prolonged inquiry Dr. Springthorpe found that the officer was placed on duty by the direct order of the Chief Secretary against the strong protests of the inspector, the acting inspector, and the acting superintendent of Yarra Bend Asylum. No such officer should under any circumstances be in medical charge of patients such as the insane, and the one position that should be absolutely closed to such a man was that of medical officer in an asylum. In the course of his inquiry Dr. Springthorpe applied to the Chief Secretary for a copy of the report by Dr. Jamieson and Dr. Joske, and was informed by that gentleman, "I have made full inquiries into, and finally dealt with, the matter," and the request was refused. At this stage the papers dealing with the case came before Mr. Smith officially in his capacity of acting inspector. Just before going on sick leave Mr. McCreery had intended to lay a charge against the officer, but had not done so. Mr. Smith felt that it would be futile to lay a charge, as the evidence upon which the charge was to be laid had already been placed before the Minister, and the latter had, to use his own words, "finally dealt with the matter," and was not likely to stultify himself by sending the case on to the Public Service Commissioner, and it was at his option to do so or not. Mr. Smith accordingly wrote a memorandum asking the Minister to reconsider the evidence or to consider his (Mr. Smith's) retirement, as he felt that it was impossible to insure proper administration if the medical officer referred to should remain on duty. It should be stated that Mr. Smith has been twenty years in the service, is not entitled to pension or compensation, and in the ordinary course of promotion by seniority would in a few years have reached the highest position in his department. He is regarded by the whole profession as the ablest man in the lunacy service, a most capable administrator, a strict disciplinarian, and a thorough expert in insanity. He is also the clinical lecturer on the subject at the university. The Chief Secretary replied that, as Mr. Smith failed to grasp the legal position in respect to laying a charge and wished the Minister to adopt an improper course of procedure, he must accept his resignation. The press and the profession are unanimous in protesting against the Minister's action, but there the matter rests at present, and Mr. Smith is dismissed and the officer retained.—From the *Lancet*, October 18th, 1902.

The state of affairs at the metropolitan asylums at Melbourne remains *sub judice*. The Minister informed Dr. W. Beattie Smith that the executive council had accepted his (Dr. Smith's) resignation, and Dr. Smith replied that the official correspondence showed that while he sought to have determined the question of whether the service should be properly conducted or whether the terms of his retirement should be considered he had not actually tendered his resignation. "At the same time," he said, "great as is my interest in the special work to which I have devoted nearly the whole of my professional life, I have no desire to press my services on the State nor to hold office without the confidence and support which are essential to the proper fulfilment of its duties." The executive council appointed Dr. J. A. O'Brien, the Government medical officer, as acting inspector-general of insane in place of Dr. Smith. Dr. O'Brien immediately suspended Dr.

Stuart Macbirtie, "the medical officer," for alleged misconduct, and drew up a series of charges against him, according to the provisions of the Public Service Act. The Public Service Commission then appointed a board with a police magistrate as chairman to investigate the charges. The board has held several meetings, at which Dr. Macbirtie has been represented by counsel. Very much the same evidence has been given as at the inquiry held by Dr. J. W. Springthorpe. Dr. Macbirtie's counsel at the outset accused the chairman of the board of bias, and stated that there was conspiracy on the part of Mr. McCreery, Dr. Smith, Dr. Mullen, and others to put Dr. Macbirtie out of the service. The charges against Dr. Macbirtie were to the effect that on April 21st last he was under the influence of liquor and unfit for duty; that he had created a disturbance in the precincts of the asylum; that the use of alcohol or drugs, or both, by him had necessitated prolonged leave of absence; that he had absented himself from duty contrary to the request of the superintendent on April 23rd last; and that his conduct was subversive of discipline.—From the *Lancet*, December 6th, 1902.

Dr. Stuart Macbirtie has, we are informed, since resigned.

NOTICES BY THE REGISTRAR.

EXAMINATION FOR THE NURSING CERTIFICATE.

Seven hundred and sixty-six candidates applied for admission to the May examination for this certificate. Of this number 174 failed to satisfy the examiners, fifteen withdrew, and the following were successful:

ENGLAND.

Bucks County.—Lily Mary Thorp, Annie Goss, Lily May Welford. Charles Watson, Albert Edward Collins.

Cumberland and Westmorland.—Maggie Mackie, Mary Ellen Currie. Walter Part, George Howe, Leonard Aynsley, James Reid.

Derby County.—Hannah King. Thomas Devaney, Arthur Litchfield.

Devon County.—Annie Mary Harford, Edith May Bright, Edith C. Crouch, Fanny Fry. Joseph Foxall, James Charles Teague.

Durham County.—Kate Adelaide Smyth, Elizabeth Alma Carter.

Essex County.—Annie Carr, Emily Elizabeth Miller, Florence Simonds, Winifred T. Williams.

Kent County, Barming Heath.—Mercy Scutt, Clara McAlister, Kathleen Naomi Hussey, Margaret Miller. Ralph Joseph Humphrey.

Kent County, Chartham Downs.—Florence Brown. John Glanville Kellow.

Lancaster County, Rainhill.—Alice Hollerton, Florence Peach, Agnes Annie Peace, Carrie Busby, Emily Margaret Alderson, Ellen Pascol, Florence Hastings, Margaret Jane Williams, Florence Mary Baldrey, Edith Lilly Johns. Herbert Deakin, Ellis Suttin, William Thomas Saunders, William Henry Thomas, Walter Davis, George Richardson, John Richard Howden, Arthur Edwin Herbert, George Wilkes, James Humphreys, John Joseph Lewington, Harry Helliwell, Walter Lewindon, Arthur Page, Samuel Marriott.

London County, Banstead.—Frances Alice Crabb, Edith Maud Nutheen, Eva Harris, Laura Highton, Alice Mary Hoskins, Edith Maria Osborne, Agnes Lawrence Waterman, Katie Bracey, Ada Jeffrey. Allan Pring, George Lawrence, Evan Jarvis, Arthur Ernest Smith, Joseph John Massara, James Jordan, Tom Christian, Richard James Hyder, William Roby George.

London County, Bexley.—Ethel Grace Allen, Margaret Coleman, Elizabeth Crompton, Ethel May Mumby, Rachel Gage, Mary Agnes Carrigan, Caroline Elizabeth Ford, Edith Widdop, Caroline Nixon, Ethel Beatrice Fuller, Elizabeth McQuade, Florence Louisa Joscelyne. Thomas Sharp Treweeke, William James Millard, Thomas William Stainsby, Edmund Baker, Charles William Lodge, Harry Dyson, Herbert Stanley Berry, Sydney Allen, William Charles Jose, Edmund Stanley Burch, Ernest Henry Valentine, Edwin John Hill, William

Hunt, George Poffley, Albert Victor Self, Albert Edward Brian, Frederick Charles Cannon.

London County, Cane Hill.—Emily Hart. Reginald Best, James Townsend, James Irons Andrews.

London County, Claybury.—Georgina Tuft, Margaret Ellen Moore, Tattie Owen, Margaret Gartly, Constance Haste, Harriett Hailes, Beatrice Mary Catherine Bracken, Rosa King, Edith Blanche Read, Janie Lander. William Charles Cook, John Henry Shuman, Howard Talbot, Walter Charles Lamb, Robert Almond Bryning, Albert Hayward, Joseph Doran, Charles Curtis Haylock.

London County, Hanwell.—Helena Wickles, Mary England, Ada Castle, Florence Alice Evans, Edith Jane Ingram, Amy Grove, Emilie Mary Mannock, Edith Castle, Edith F. Holdaway, May Higgins, Edith Annie Johnson, Harriet Robins, Nellie Agusta Spencer, Rose Edline Rose, Eliza Creed.

London County, Epsom.—Annie Rayment, Lizzie Tillett, Alice Yuill, Gertrude Louisa Abbott.

Middlesex County.—William David Roskilly, Maurice Donoghue, Frederick William Mawson.

Northumberland County.—Christopher Fairs, Richard Richards, Patrick Malloy, William Thomas English, Matthew James Meynell. Florence Heslop, Mary Baker, Rits Marion Bunton, Hannah O'Hanlan.

Oxford County.—Charlotte Emma Brain, Mary Buckingham, Mary Nelson, Edith Alice Draper, Eleanor Ade, Agnes Jennings, Alice Beatrice Kirby, Mary Ellinor Washington, Kate Nelson, Lydia Jane Buckingham.

Salop and Montgomery.—Emma Whootton. Edward William Craggs.

Stafford County, Burntwood.—Frances Helen Glover. William James Perry. Adeline Perry, Annie Wall.

Stafford County, Cheddleton.—Alice Campbell Denman.

Suffolk County.—Elizabeth Annie Fuller, Alice Gertrude Bloomfield, Agnes Louisa Spooner, Annie White, Emma Clara White, Doris Annie Sharpe, Jennie Hines, Ethel Maud Greenard. Joseph William Verity, William Thomas Barrows, William Hewitt, Thomas Houghton, William Munson. Helen Florence Watkinson. Harry Robert Rogers.

Surrey County, Brookwood.—Sarah Jane Day, Hannah Earnshaw, Catherine Matthews, Lucy Palmer, Florence Mary Smith, Sarah Edith Myatt. William Ayling, William Cummins, Harry Gardiner, Thomas Huntingdon, Frederick George Knott, George Ledger, Frank Nash, George Edwin Page, Ernest Robert Witthames.

Sussex County, Haywards Heath.—Alfred Bristow, Edward Cottingham, Harold S. Heaney, Richard Tanner.

Sussex County, Chichester.—Isabella Rogers, Ellenora Letitia Best, Mary Ann Ward, Ruth Rollins, Ellen Bertha Kent. Thomas Kerslake, Robert James Bucknell, Harry George Munt, Frank Pearson, Walter Melmoth, James Newell.

Warwick County.—Martha Jane Thomas, Jessie Dicken, Emma Elizabeth Crooke, Rosetta Reader, Florence Agnes Hughes, Fannie Bottrell. Robert Cowley, Francis James Bradnock, Alfred Buckingham.

Wilts County.—Ernest Groves, John Wheeler, Richard Alexander, Charles Sims, Thomas Russ, Edward Weston.

York, North Riding.—George Charles Childs.

York, West Riding, Menston.—Mary Ellen Dobson, Lizzie Moody, Nellie Charlton, Elizabeth Jane Keena, Jane Tyreman, Laura Hart, Mabel Charlton, Annie Elizabeth Robinson. Ellis Broadley, William Henry Beaumont, Joseph Gathorne Stansfield, William John Robinson, Evan Broadley, George Blackburn.

York, West Riding, Wadsley.—Hilda Worrall, Mary Ellen Stewart, Ada Colgraves, Constance Ethel Bass. Patrick Long, Frederick Swallow, Harry Barter, Frederick Catterall, John Hutchinson, James Moxon.

York, West Riding, Wakefield.—Lillian May Hartley, Sarah Ann Hoyle, Marion Hobbs. Benjamin Warcup, George Portas, Harry Kirkup, William Appleby.

Derby Borough.—Martha Anderson. Frank Hodgkinson, Edward Newham Holland, Benjamin Hardy.

Plymouth Borough.—Sidney Penney, Ernest George Burton, John Hooper Bertie Wilberforce Casely.

Sunderland Borough.—Frances Knott, Jane Forster. William Allen Grant McHardy, George Brown, Abraham Manning.

West Ham Borough.—Susan Richardson, Alice Hannan, Gladys Madeline Read, Mary Phelomena Walts. Albert Charles Bird, Nelson Ellis, Walter William Winchester, George Jacklin.

Birmingham City, Winson Green.—Rose Ellen Elton, Clara Jackson, Lydia Ellen Fitzhugh. Leonard Corfield, Thomas Perry.

Bristol City.—Harry Davis, Alfred Summers. Eleanor Rutherford, Florence Henrietta Flook, Minnie Coles, Harriet Gardner, Lily Florence Warfield, Delia Agnes Kelly.

Exeter City.—Emily Annie Warren, Alice Marion Warren.

Hull City.—Elizabeth Ann Pearson, Anne Grainger, Ada Mary Rogers, Kate Epton. James Warren.

Newcastle City.—Sarah Wray, Catherine Melvin. Robert Claverling, William Parker, George Alfred Smith.

Notts City.—Amy Wood, Lucy Ball, Minnie Kate Trewavas, Gertrude Till, Mary Elizabeth Moulds. Charles F. Taylor.

Caterham.—Benjamin Bucknell, John William Woodall, George Carey, Henry Lewis, Frederick Bungay. Sophie Coe, Minnie Homewood, Rosanna Flood, Artis Alice Lloyd, Dorcas May Wood.

Leavesden.—Annie Goodwin, Helena Hannah N. Blumberg, Gertrude Maud Johnstone, Mary Sarah Winfield. Charles Ridgway, Sydney Frank Allan, Albert William Paull, Ernest Simons, Joseph Dennis, Alfred Pearce, Alfred Monk, Henry Richardson, Joseph Garrison.

Warneford, Oxford.—Martha Bird, Amelia Beesley. Richard John Brooks.

Bethlem, Royal.—Ina Nellie Scott, Sophie Knowles, Amy Louisa Symonds, Mary Matilda Tarr, Margaret Annie Evans, Kathleen Langley, Maud Hetty Whitehead. Edward William Perry, Isaac B. Linton, Albert James Coston, Frederick Herbert Andrews, George Edward Keane.

Camberwell House.—Maud Riches, Mimmie Moore.

Northumberland House.—Annie Needs, Laura Finch, Charles Thomas Brown, Albert Blake.

Peckham House.—Ernest Arundell Harris.

Retreat, York.—Louisa Pilling Fletcher, Annie Tindle, Annie Emma Zantler, Ethelwyn Rowntree. William Hayes.

Wood End House.—Emily Stowers, Martha Young.

Wye House, Buxton.—Duncan McRae. Mary Poulton.

Bridgend, Glamorgan.—Sarah Jane Brewer, Charlotte Burnell, Amy Sloman Cook, Morfydd David, Helen O'Flarthy Edwards, Adelaide Francis, Adie Havard, Mary Hearn, Ada Lean Jenkin, Margaret Alicia Jones, Annie Margaret Knorr, Rhoda Roberts. John Cox, Edward Howard Davis, Jenan Griffiths, John Griffiths, Michael Joyce, Rees Lewis, Rees Morgan, William Gilbert Price, Charles Woolls.

Abergavenny.—Emily Ann Evans, Charlotte Gratton. Alfred Davies, Frederick Thomas Hill, Thomas Nauncey, James Lawrence, George Meredith, William Thomas.

Ballinasloe.—Anne Mulvey, Mary Fitzpatrick, Catherine Kelly, Mary Anne Malane, Anne Morgan, Mary Hannon. James Callaghan, Malachy Tully, Michael McHugh, Patrick Kelly, John Hynes, Bernard Kelly.

Cork District.—Nora Barrett, Julia Kehely, Cathleen Geraghty, Mary Anne Callaghan, Henrietta Evans, Susanna Perratt, Mary Donovan, Hanna F. Barry. Timothy Barry, John Kelly, William Moyinham.

Donagal District.—William Allison.

Richmond District.—Teresa Evans, Clara Stacey Willis, Mary Ann Lotterdell, Lizzie Behan, Jane Moran, Bridget McGormack, Mary E. Ryan, Mary Ann Wogan. Patrick Marron, Michael Matthews, John Mulligan, Patrick O'Bryan, Gilbert Dando, Martin Kenna, William J. Grogan, Patrick Murray, John P. Fogarty, Thomas Fagan, Thomas Boylan, Francis Mohan, Tim O'Leary, Andrew Walsh.

Farnham House.—Sarah McMullan.

Highfield House.—Ellen Kavanagh.

St. Luke's Hospital.—Emily Marie Thatcher, Matilda Gertrude Rooke.

St. Patrick's Hospital.—Bessie King, Etta Foster, Lily Wisely. Michael J. Tighe.

SCOTLAND.

Fife and Kinross.—Mary Bryien, Robina Johnstone, Robina Cunningham, Agness Inglis, Jessie Kinneir Morran, Rachel Hutcheson, Maggie Neilson, Margaret Anderson. William Mitchell, George Hall, James Kidd, John Anderson, James Wilson.

Gartloch.—Archibald McDougall, John Clarke Donald. Kate McPhillips, Jenny Agatha Browne.

Govan District.—Mary Anderson, Charlotte Barnaby, Georgina Thomson, Isobel Ross, Mary Tait. John Cormack, William Mathieson, Peter Mathieson Alexander Blackie, James Shand, William Macrae.

Inverness.—Mildred Roberts, Jessie McErlach. Peter Stewart.

Leamington District.—Elizabeth Kelso Scott, Robina Swanson Kempen, Mary Scott Finlay, Usa Fraser Marr, Catherine C. Morrison, Mary Stewart, Mary L. Allen, Gracie Shepherd Kerr. Malcolm Haggart, James Martin, Owen Donnelly, John MacEwan.

Mavisbank.—Annie Elizabeth Sutor, Elizabeth Rylie Langland.

Midlothian and Peebles.—Elizabeth Darwood, Mary Grant, Isabella Grant Gordon, Hugh Corsie, James McDonald, George Anderson, John Sellars.

Perth District.—Annie Heron, Gertrude Hutcheson, Winifred Cameron.

Riccarton.—George Lindsay, George Leys Gibb, Robert Gordon.

Roxburgh District.—Margaret Jane Weir. William Coull.

Smithton.—Rebecca Harkness, Eliza Ann Lawrie, Dolina Morrison. David Dinnie.

Stirling District.—Catherine Collison, Jennie Weir, Walterina Peterkin, Caroline Geddes, Emily Potter, Margaret Milne Clark. James Hughes.

Woodilee District.—Edith M. Dickson. David McDonald, Charles McRae, Donald MacIntyre, John Baskin, Edwin Knight. Jane Brown, Joan McPhee, Mary McInnes, Christina Gibb, Maud Hannah, Isabella Paterson, Annie Maclean, Rachel Doig, Margaret Campbell.

Aberdeen, Royal.—Elsie McDonald, Maria Scott, Annabella Thomson, Maggie Watt Batchen, Mary Wilson, Janet Melvin, Jane Dawson Munro.

Crichton, Royal.—Catherine Murray, Margaret McDonald, Margaret McLeod Sharpe, Janet Harrison, Dina Milne, Nellie Grieve Alexander, Catherine Corbett, Annie Lawson Harper, Agnes Thorn Emslie, Jeanie Russell, Isabella Littlejohn.

Edinburgh, Royal.—Christina Robertson, Annie Gordon, Isabella Hy. Martin, Wilhelmina Rodger Cameron, Alice Maria Milne. John Ross, Thady Gilbride, John Duncan, John McDonald.

Glasgow, Royal.—Helen Urquhart, Agnes M. Airlie, Elizabeth Cameron, Annie Sinclair, Catherine McVicar.

James Murray's, Royal.—Janie E. S. Morrison. Alexander Cameron, William Keith Tasker.

The following is a list of the questions which appeared on the paper:—1. What is the spinal column and what are its uses? Of how many bones is it constructed and how are they united? 2. Where is the liver situated, what is its use, and what part does its secretion play in the process of digestion? 3. Describe the structure of the skin. What are its functions? 4. What symptoms should you expect to find in a case of disease of the respiratory organs? 5. Mention the more common forms of insanity, and state briefly the distinctive features of each. 6. What is a fracture? What is the difference between a simple and compound fracture? Which is the more serious injury? Why? 7. What are the chief kinds of sick diet and why are they given? Describe the mode of preparing beef-tea. 8. What special points would you observe in bathing insane patients? 9. State the normal temperature of the human body; the average rate of the pulse (a) for a man, (b) for a woman; and mention how many times in a minute an adult, as a rule, breathes. 10. Describe carefully how you would wet-pack a patient, and state what precaution should be taken during the time the patient is in the pack.

EXAMINATION FOR NURSING CERTIFICATE.

The next examination will be held on Monday, November 2nd, 1903.

EXAMINATION FOR PROFESSIONAL CERTIFICATE.

The next examination will be held on Tuesday, July 21st, 1903.

GASKELL PRIZE.

The next examination will be held on Wednesday, July 22nd, 1903.

NOTE.

As the names of some of the persons to whom the Nursing Certificate has been granted have been removed from the Register, employers are requested to refer to the Registrar in order to ascertain if a particular name is still on the Roll of the Association. In all inquiries the number of the certificate should be given.

NOTICES OF MEETINGS.**MEDICO-PSYCHOLOGICAL ASSOCIATION.**

The sixty-second Annual Meeting of the Association will be held in London on Thursday and Friday, July 16th and 17th, 1903, at the Rooms of the Association, 11, Chandos Street, Cavendish Square, London, W., under the Presidency of Dr. Ernest W. White. There will be a meeting of committees as follows, on Wednesday, July 15th, under the retiring President, J. Wiglesworth, M.D., F.R.C.P.Lond.:

Educational Committee at noon, Parliamentary Committee at 2 p.m., Rules Committee at 2.30 p.m., Statistical Committee at 4 p.m. The Council will meet at 9 a.m. on Thursday, July 16th, at 11, Chandos Street, Cavendish Square, W.

The Annual Meeting will commence at 11 a.m. on Thursday, when the usual business of the Association will be transacted.

2 p.m.—the President's Address, after which a discussion will be opened by A. R. Turnbull, M.D., upon "Female Nursing of the Male Insane."

Friday, at 10 a.m., F. W. Mott, M.D., F.R.S., "Tumours of the Brain in Asylum and Hospital Practice," with lantern demonstration and photographs.

2 p.m.—"Clinical and Experimental Observations on Hebeephrenia and Kata-tonia," by Lewis C. Bruce, M.D., Physician Superintendent, Perth District Asylum, and A. S. M. Peebles, Assistant Physician, Perth District Asylum.

"A Case of Double Consciousness," by Albert Wilson, M.D.

"Mongolian Imbecility," by Charles H. Fennell, M.A., M.D., M.R.C.P.Lond.

[Friday afternoon papers may be taken, if time permits, on Friday morning.]

Dr. and Mrs. Corner will be "At Home" on Friday afternoon from 3.30 to 7 o'clock at Brook House, Southgate, Middlesex, and invite members of the Association and ladies. The band of the Royal Artillery will play a selection of music.

The Annual Dinner will take place on July 16th (Thursday) at the Hôtel Métropole (Whitehall Rooms), at 7.30 o'clock. Tickets one guinea (wines included).

Members are requested to notify their intention of dining to the Secretary.

On Saturday, July 18th, the President, Dr. Ernest W. White, invites members of the Association to luncheon at 1.45 o'clock, at the City of London Asylum, Stone, near Dartford, Kent, and members are requested to reply direct to Dr. White. The institution can be visited before or after luncheon.

South-Eastern Division.—The Autumn Meeting will be held, by the courtesy of Dr. Rawes, at St. Luke's Hospital, in October, 1903.

South-Western Division.—The Autumn Meeting will be held, by the courtesy of Dr. Morrison, at the Hereford County and City Asylum, in October, 1903.

Northern and Midland Division.—The Autumn Meeting will be held, by the courtesy of Dr. T. W. McDowall, at the Northumberland County Asylum, Morpeth, in October, 1903.

APPOINTMENTS.

Brown, Josephine, M.B.Lond., appointed Assistant Medical Officer to the Lincoln County Asylum, Bracebridge.

Cross, Harold R., L.S.A., Assistant Medical Officer to the West Riding Asylum, Wakefield.

Header, F. P., M.D.Edin., appointed Senior Assistant Medical Officer to the North Riding Asylum, York.

Keay, John, M.D.Glas., F.R.C.P.Edin., Medical Superintendent to the Bangour Asylum.

Philpott, A. J. W., M.B., Ch.B.Melb., appointed Senior Medical Officer of the Yarra Bend Asylum, *vice* Stuart Macbirnie, M.B., Ch.B.Glas., resigned.

Walker, Ernest T. Leay, M.B., C.M.Glas., appointed Assistant Medical Officer to the Warneford Asylum, Oxford.

THE JOURNAL OF MENTAL SCIENCE

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VOL. XLIX.

Part I.—Original Articles.

The Presidential Address, delivered at the Sixty-second Annual Meeting of the Medico-Psychological Association, held in London on July 16th, 1903. By ERNEST W. WHITE, M.B.Lond., M.R.C.P., Professor of Psychological Medicine, King's Coll., Lond.

GENTLEMEN,—In commencing the work of the office to which you have elected me, I desire to convey to you my sense of the honour conferred and of the responsibility which this honour entails. In heartily thanking you, I assure you it will be my constant care to maintain impartially the rights of members and the freedom of debate. While checking exuberant verbosity, I shall endeavour to encourage useful discussion and to expedite business at all our meetings, and shall look to you for the support which is necessary to preserve intact the dignity and privileges of the Chair.

For fifteen years I have been closely connected, either as South-Eastern Divisional Secretary, Examiner, Auditor, or member of Council and of the Standing Committees, with the work of this Association, and am therefore fully conversant with its requirements and aspirations. I do not, however, attribute to this fact my election as your President, but am inclined to deem it a mark of regard for the work done in recent years in the public asylums of the metropolis to advance the care and

treatment of the insane. Our much esteemed editor of the JOURNAL, Dr. Henry Rayner, in 1884 was the last medical superintendent of a county or borough asylum in the metropolitan area who presided over us. We are fortunate in still retaining his valuable services.

Inasmuch as ours is an association with large vested interests, high aims, and great responsibilities, it has occurred to me that I can best serve those interests by addressing you to-day not upon any special subject, as has been done on several recent occasions—notably last year by Dr. Wiglesworth, with marked ability,—but upon the legal and general desiderata for the insane and those to whose care they are committed, and upon whose efficiency their chances of recovery so much depend.

I am the more induced to take this course for these reasons. We are near to legislative changes. There is much diversity of opinion upon the changes necessary. We recognise that certain sections of the law have not worked in the best interests of our patients—nay, further, have tended in many instances to delay their treatment and retard their recovery,—that early treatment must be encouraged by new enactment, that efficiency in both care and treatment must be ensured, and that abuses which have existed in the recent past must be checked and rendered impossible in the near future.

Before, however, we discuss our requirements, we must remember that the occasion demands a retrospect as well as a prospect. What were the incidents of the year just concluded? What was its scientific progress? What were our losses by death? The most striking incident was probably the disastrous fire at Colney Hatch Asylum, whereby fifty-one lives were lost. The facts of this calamity are indelibly imprinted on the memories of all of us ; and a fire which occasioned the greatest loss of life of any in the metropolis since the great fire of 1666, and coming as it did so near home, cannot fail to engage our attention as to its cause and lessons. The probable cause was a spark or sparks from the smoke shaft distant about twenty-six feet from the window of the clothes room, which might have been open at the top an inch or more at night to prevent stuffiness, for it is the usual custom so to leave the windows of these rooms. The stoker would fire up at 5 a.m. to get his day rooms warm for the patients and staff at six, and the high wind blowing would carry the sparks in

the direction of the clothes room, in the upper part of which the fire was first discovered about 5.20 a.m. Now what are the lessons this fire conveys? They appear to be—

1. That all temporary buildings are unsuited to the insane.
2. That provisions for dealing with fires must be complete in all our institutions, and that our fire brigades must be as efficient and self-reliant as they can be made.
3. That all stoke-holes, furnaces, and smoke shafts at various points in the buildings must be abolished, and live steam from one general station used as the heating agency in place thereof.
4. That all alternative exits and escape staircases must be systematically used by patients for their egress; otherwise in the event of fire the insane refuse to leave except by the door they are accustomed to go out by.

It is a moot point whether outer doors should be master-locked at night. I think it unnecessary, since electric bells can be fitted which will ring when the door is opened at forbidden hours. Before leaving this subject I must allude with pride and satisfaction to the one bright feature in the catastrophe, the heroic conduct and self-sacrifice of Dr. Seward and his staff. They worked to exhaustion in their efforts to save life and relieve suffering. We are proud of such fellow-workers who so nobly did their duty!

The large percentage of deaths from pulmonary tuberculosis in public asylums and hospitals for the insane has engaged our attention during the past year. Thirty years ago, when I first took duty in this branch of medicine, the insane were deemed peculiarly liable to this disease; in fact, insanity was thought to predispose to death by pulmonary tuberculosis. To-day, however, we recognise that this predisposition arose in the main from defective hygienic conditions, too little cubic space by day and night, insufficient ventilation and ill-regulated heating, too little fresh air and exercise, uncleanly habits, and a total absence of isolation whereby alone infection can be guarded against. The general hygiene of our institutions has been vastly improved in recent years, and during the past twelve months the question of constructing or allotting suitable hospitals and sanatoria for the isolation and proper treatment of patients suffering from pulmonary tuberculosis has attracted the attention of the committees of many public asylums. In some cases temporary isolation hospitals or special wards and

grounds have been set apart for this purpose. Amongst others the authorities of Lancaster, Warwick, Claybury, and Leavesden Asylums in England; Woodilee, Gartloch, and the Crichton Royal Institution in Scotland, have taken steps in this direction. The subject is a difficult one, as the varied mental states have to be considered (in addition to the physical condition of our patients) in planning or allocating buildings for this purpose; but the action of these committees is undoubtedly in the right direction. While discussing this matter I would draw attention to the value of light and its health-giving properties in the general treatment of the insane. Our day rooms should have light on all sides. At Stone the wards are only separated by glass screens, and we have glass panels in the upper half of every door (single rooms included) except where contra-indicated. When we first introduced these in 1887 the Committee said, "What a dreadful glazier's bill we shall have!" My reply was, "The more glass you have the less you will have broken, because the less will be the feeling of restraint to the patients," and such has proved to be the case.

In the matter of artificial ventilation our inlet air-ducts in asylums are commonly fouled by patients pushing the *débris* of food, bits of clothing, cigarette ends, etc., through the gratings. To overcome this Messrs. Kite and Co. have made, from my suggestion, a grating for wards and dormitories removable by the ordinary gas or shutter key, whereby access is gained to a flap regulating the intake, and to a wire tray which catches the *débris* mentioned, which *débris* can then be systematically removed. The warm air can also be diverted by the nurses from the ward below to the dormitory above, and *vice versa*.

The introduction of electric plant into asylums has brought with it many advantages, and not the least of these has been the exhaust fan ventilator. Our dormitories, formerly never properly ventilated without draughts, are now kept delightfully sweet at all times and cool in summer by electric fans which extract the vitiated air from several points in each ceiling; and, moreover, the exhaust draught can be carefully regulated by the night staff.

The great increase in the mortality from dysentery in asylums in recent years continued to engage attention during 1902. It is a regrettable fact that this disease has become endemic in some of the most recently constructed institutions,

in which it has undoubtedly been introduced by cases transferred from other asylums where the disease existed. Thanks to the investigations of Dr. Mott and others, we have recognised that this endemic disease may at any time become epidemic and communicable under conditions of overcrowding and defective sanitation. Fortunately the attention drawn by the register for diarrhoea and dysentery instituted by the Commissioners in Lunacy will tend to check any such sanitary defects in our buildings. Active workers in the Association have also recently been occupied in investigating auto-intoxication, the toxæmic origin of certain forms of mental disease, and the value of antitoxic treatment—a subject which offers an excellent field for scientific research. Many of us in years past have been struck by the marked mental improvement in apparently chronic cases during an attack of enteric or other febrile disorder—an improvement, alas! of but a temporary nature, and attributable solely, I believe, to the antitoxic action of the fever germs.

The splendidly equipped pathological laboratories of London and Edinburgh, fed by the asylums of the metropolis and Scotland respectively, continue to pursue their excellent work, as evidenced by the *Archives* published last year. The appointment of pathologists to our large institutions for the insane, and the prominence thus given to pathological research, is being productive of excellent results. Combination in pathological investigation under capable directors, however, promises even better results than can be achieved by individual efforts, and such combination should therefore be encouraged in other parts of the kingdom and empire.

In contemplating the active field of our workers in psychiatry, we are irresistibly reminded of those whom the hand of death has removed from our ranks, some in the plenitude of years, others in the full maturity of manhood, and others, alas! in the age of early promise. In 1902 Mr. Holland, the Nestor of the Lancashire superintendents and father of Whittingham Asylum, went to his rest after a period of well-earned retirement extending over nearly a quarter of a century. About the same time Dr. Hills, the doyen of East Anglian alienists, who for twenty-six years controlled with ability and success the destinies of the Norfolk Asylum, paid the debt of nature after fourteen years' freedom from responsibility. It is a curious fact that his

former chief at the Kent Asylum at Barming Heath, Dr. James Huxley, an early member of this Association (elected June, 1847), a pensioner of forty years' standing, and a brother of the late Professor Huxley, survives him. Other losses in this category were Dr. Gasquet, formerly of the Burgess Hill Retreat, a quiet worker of a retiring disposition; and Dr. George Mickley, formerly of St. Luke's Hospital, who enjoyed for but a short period the pension allotted him. Under the second heading we lament such men as Drs. Arthur Strange, Bonville Fox, and Law Wade. The first-named lived a generation for his people at Bicton, universally beloved by all connected with the Salop and Montgomery Asylum. In Bonville Fox we lose a delightful personality and a cultured physician, who had the best interests of this Association at heart; and by the death of Law Wade the public asylums of the West of England were deprived of one of their best superintendents. In April of last year many of us listened to an interesting paper on asylum dysentery read at the South-Eastern Divisional Meeting at Brookwood by Dr. Macmillan, one of the assistant medical officers at Claybury, a young physician of promise. Little did we surmise that within a few months he would fall a victim to the disease he was investigating, to the great sorrow of all who knew him and appreciated his qualities of mind and energy in scientific research.

The concluding of this brief retrospect brings us to the prospect, and to the desiderata of our Association and of its various divisions. The Lunacy Commissioners' Blue Book issued in June, 1902, tells us the indisputable fact that insanity is on the increase, that the average annual increase of patients for the quinquennial period ending December 31st, 1901, for England and Wales was 2270 (2140 rate-paid and 130 private), an increase exceeding the average annual increase of the preceding ten years by 483, and that of the preceding five by 500. The average annual increase of the rate-paid insane in the county of London is about 500, but curiously enough this increase has been greater in those years in which large new asylums have been opened by the County Council. This Blue Book also tells us there is one insane person to every 298 sane, whereas in 1859 the proportion was one to 536; and that the advance in the ratio has been almost entirely in the rate-paid class; that there has been no sustained advance in the average

recovery rate in the past thirty years ; and that there has been an important diminution in the death-rate. The last-named facts point to the accumulation of the chronic insane. To learn that there has been no material advance in the recovery rate with the development of rational principles of treatment and the vastly improved environment of the insane is not pleasant reading, and it is our duty to discover, if possible, why this is so.

In the first place we must discuss the population we are dealing with. Are there any racial or environmental changes when compared with the population of 1859? Under racial changes we note—

1. That with the increase of our population there has been less encouragement for eligible aliens to settle in our country and intermarry with our people ; consequently less infusion of new blood into the race than formerly. The aliens we do receive are mostly needy town-dwellers of poor physique, with neurotic inheritance and frequently with constitutions undermined by disease. Moreover they are often undesirables of the criminal type. Such immigrants are likely to be detrimental rather than of benefit to the future nerve stability of our race.

2. The influence of heredity. This was fully discussed by Dr. Wigglesworth in last year's address. The intermarriage of neurotics and those with inherited taint of insanity, now all too common, should be discouraged by every one, and prevented if possible by State interference. Only last year a young fellow, a private patient at Stone, on recovering from an attack of acute mania, married almost immediately the daughter of a lady patient who was a bad case of chronic mania. The *fiancée* used to visit her sweetheart and mother the same day. I did my utmost to discourage the alliance, but in vain. Disaster awaits the progeny.

3. The altered type of occurring insanity. When I look back to the admissions in county and borough asylums thirty years ago, I am forcibly impressed by the fact that there is a vastly increased number of cases of melancholia relatively to mania in new admissions nowadays. Then in the Norfolk Asylum we had plenty of cases of true acute mania, most of which had a definite cause and made good recoveries in from two to six months. Now we seldom see that typical acute mania, but are inundated with cases of melancholia without

definite cause, of insidious onset, in which treatment is beset with many difficulties, convalescence protracted, relapses are common, and from which chronic insanity often results.

During the last few years one has also been struck by the large number of cases of evolutionary mental breakdown occurring in patients from eighteen to twenty-eight years of age of the upper and middle classes, the result of the strain of education and the worries of life upon brains unequal to the stress under which we live. Is it, then, that the race is less robust mentally as well as physically than formerly, and that mental breakdown tends to the asthenic type? There are, I fear, facts which might lead us to this conclusion.

4. Too early marriages among the poor and too late marriages in the upper and middle classes are more frequent than fifty years ago ; these do not conduce to a healthier stock mentally or physically.

5. I am afraid we must conclude that there are more congenital imbeciles born relatively to the births generally than in 1859. We are undoubtedly perturbed by the ever-growing feeble-minded element in the community, for whom early legislation is demanded. It was stated publicly the other day that one person in every 150 of the population belongs to this section ; and when we consider how unfitted imbeciles are to battle with every-day life, and how incapable they are of adaptation to their environment, we must not be surprised that the feeble-minded at large are constantly a source of trouble, and often bring disgrace upon themselves and their families.

6. Inherited syphilis and hereditary tendency to pulmonary tuberculosis must operate as factors in causation more than formerly. That interesting disease, infantile general paralysis of the insane, of which I have seen quite a large number of cases recently at the neighbouring asylum at Darenth, has probably for its sole cause inherited syphilis. I must add I am not one of those who believe in syphilis as the only etiological factor in general paralysis of the insane ; but knowing what we now do concerning syphilis as a cause of insanity, surely we should take part in agitating for the replacement upon the statutes without delay of the Contagious Diseases Act (Man).

7. The abuse of alcohol is, as we all recognise, both a cause and symptom of insanity, often indistinguishable. We are now

a spirit-drinking race, which we were not in 1859. There is no standard of purity of these spirits. May not both the immaturity and the adulteration by noxious constituents be important factors in the causation of insanity, and should not the Legislature enforce both the maturity and purity of all alcoholic drinks?

8. Many weaklings who would formerly have died in infancy are now reared to marry and reproduce a faulty stock.

Under environmental changes we note—

1. The population is urban rather than rural to-day. We are rapidly becoming town-dwellers. Overcrowding is common. The people breathe less pure air and have less outdoor exercise under the beneficent action of the sun's rays. Their food is badly selected, less easily digested, and less nutritious than formerly. It is, moreover, frequently badly cooked.

2. The stress of life is far greater than formerly. Over-education during development, late hours and unnatural excitement, must leave their marks upon the race as well as upon the individual. Having discussed briefly certain conditions affecting the vitality and predisposition to mental disease in the present population, we are led to consider the existing arrangements and desiderata for the care and treatment of the insane. This I propose to do under the two headings, (*a*) rate-paid, (*b*) private.

Much has been done in recent years to improve the means of care and treatment of the rate-paid insane in the counties and boroughs. Unfortunately on the score of economy the patients have been congregated in too large communities under one roof, and especially has this been the case in the county of London, with its huge asylums, each containing from 2000 or 2500 patients. Has not this been false economy? It may be urged that with the larger number you can show a somewhat lower weekly maintenance rate, but true economy would be in better results in recoveries even at a considerably higher maintenance charge for a short time. Think of the cost to the rate-payers of the patient who becomes insane at twenty and lives to the age of seventy or eighty years in a county or borough asylum! Huge institutions containing both acute and chronic cases stand condemned by the public and the expert alike! The medical superintendent knows relatively nothing of the patients individually. There is a certain amount of classification, it is true, and the cases are allotted for treatment to

the care of the various assistant medical officers. These gentlemen are not all enthusiasts in medical treatment, or equally skilled. Some may do their utmost for the recent cases committed to their charge; others go the rounds and perform their ward duties in a perfunctory manner, devoting their best energies to the amusements which form a feature in asylum life, and which may be more to their taste. The recent admissions under officers of the latter class, unaided by medical science, tend to drift, and this is where the daily supervision of the medical superintendent is needed, but only obtainable in asylums with less than 600 patients.

The many chronic cases apparently drifting to dementia one has seen in recent years subjected to school discipline and re-educated back to natural life and mental health, is a source of great encouragement in our work in this direction, and forcibly impresses upon us the necessity of safeguarding, if possible by legal as well as medical effort, all patients against being classified as incurable and neglected as regards treatment while chances of improvement and even of recovery still exist.

For a long time past the possible value of physical drill for the female insane, who cannot be employed outside at manual labour, has occurred to me. We must have systematic methods of rousing the listless and apathetic drifting to dementia from their lethargy, and I believe good will result from the establishment of these physical drill classes. When alluding to this the other day at Claybury, I was delighted to learn the idea had also occurred to Dr. Ewart, who had started such a class and was hopeful of beneficial results. Since writing the above I find Dr. Goodall has also initiated physical drill at the Carmarthen Asylum.

At last the separation of the acute insane in the hospital from the chronic in the asylum, on the one estate, advocated by many of us twenty years ago, is being generally recognised as imperatively necessary to prevent the curable cases being lost sight of in a crowd of chronic sufferers. These acute hospitals, to my way of thinking, should be of the linear gallery type, the buildings extending east and west, the galleries with southern frontage being used for day space and transit, and intersecting the ward day rooms at right angles. The wards then are only separated by glazed screens in the galleries, and the sick wards are of the true hospital type and terminal,

removed from the noise and excitement of the centre, and having large secluded gardens. Telephones nowadays bring medical aid sufficiently near these terminal hospitals. There must be a subway under the galleries and wards for air-ducts, pipes, etc., with a trolley-way for food and stores, and a lift for each ward. The buildings should be two-storied, with all the upper floor for dormitories and single rooms. The other single rooms would be on the north side of the galleries on the ground-floor. The advantages are cheapness of construction and up-keep, compactness, facilities for medical and general supervision and treatment, and ease of administration. We have it all at Stone except the subways, and I know of no asylum in which acute cases can be so readily treated and supervised medically and generally. You have small wards, so much to be desired, and yet in an emergency with a temporary reduction of staff the dividing glass doors can be thrown open and the wards become one for the time being. The through traffic of wards, so much decried in the past in the asylums of the linear gallery type, was probably their strongest recommendation. The insane are very inquisitive, they like to see people through their wards, and appreciate anything which relieves monotony ; hence detached villas will never be popular with many convalescing patients who take interest in their environment, and to whom the daily life of the wards and main buildings offers an attraction. I shall not readily forget that when we opened our new female hospital, which is terminal, one lady in the ward through which there is most traffic begged not to be sent there, adding, " How would you like to live in a village through which no one ever passed ? " Again, the large associated dining hall is most popular, although some medical superintendents in the South do not believe in it. With ease of access from the neighbouring wards of either division, the patients look forward to all their meals in the hall. It varies the monotony, associates them with members of the other sex, gives them an opportunity of enjoying music during dinner, they get their meals quickly and properly served from the kitchen, and it allows of the wards being thoroughly ventilated while they are away. With the pavilion type of asylum, and the blocks at some distance from the central hall, I grant there are difficulties, but surely the advantages outweigh the difficulties. A time limit must be

fixed for the residence of patients in the acute hospital, which should be highly equipped in staff and material and should possess all the armamentaria for scientific treatment. Chronic patients from the main building should assist by day in its menial work. Detached villa blocks for the chronic insane, classified according to employment, with a separate villa for imbeciles, should be productive of the best results in work done, and should add to the comfort of the patients. The acute hospital and detached villa blocks will soon be in full swing at the East Sussex Asylum at Hellingly; and the Ewell Epileptic Colony, opened on the first of the present month by the London County Council, is a further example of the housing of a gregarious class of the chronic insane and weak-minded with a view to their useful and beneficial employment. In London we have the advantage of possessing the chronic imbecile asylums of the Metropolitan Asylums Board, to which we can draft many of our quiet and harmless chronic demented under Section 25, Lunacy Act, 1890. Similar institutions in the provinces would, I believe, be of great benefit, and would open out accommodation in the county and borough asylums, now occupied by this class of patients.

A Bill, known as the Lunacy Acts Amendment (London) Bill, has been introduced this session in the House of Lords by Lord Carrington. It was read a second time on July 7th. It is entitled "An Act to authorise the London County Council to provide receiving houses for the reception of persons mentally affected or alleged to be of unsound mind, and to authorise the detention of such persons in such houses, and for other purposes connected therewith." It passed through committee without amendment last Thursday. Gentlemen, there is more in this Bill than meets the eye. The houses are to be not only receiving houses, but detaining houses for treatment. I think I shall be able to show you that the receiving houses (and there are to be at the outset two of these at a cost of £125,000 each, but the ultimate number is not limited) are in reality our old friend the hospital for the insane *in* London (London County Council, Special Report, 1890) in another garb and in duplicate. The memorandum states the object of the Bill is to enable the London County Council to establish houses at which persons alleged to be lunatics may be received for preliminary examination and treatment. It con-

tinues as follows :—" In the existing practice in London under the Lunacy Acts, persons supposed to be lunatics are for the most part taken to a workhouse in order to be examined before being sent to a lunatic asylum. Experience shows that this system is unsatisfactory, and leads occasionally, in the individual cases, to harm which might be avoided.

" It is believed that the proper treatment of mental disease in its earlier stages, or of symptoms of incipient mental disease, will often obviate the necessity for sending to a county lunatic asylum persons who, under the present arrangements, cannot be otherwise dealt with.

" It is claimed for the system proposed that it will thus be not only beneficent, but economical in its operation by tending to lessen the number of persons detained as lunatics in the county asylums at the public expense ; while it will be useful in assisting the classification of patients and the diagnosis and cure of mental disease in its earliest stages.

" It is proposed that the receiving houses shall be available for the treatment of out-patients.

" The receiving houses will be under the supervision of the Commissioners in Lunacy, and conducted in accordance with the law regulating county asylums."

Now Clause 2 provides for the treatment of out-patients at the receiving houses with proper accommodation, medicines appliances, and requisites for the care and treatment of such out-patients ; in fact, the complete equipment of an out-patient department.

Clause 4 provides for the appointment of a superintendent of each receiving house, who shall be resident medical officer. It also authorises a staff of such other officers as the visiting committee think fit, and it specifies they may appoint a visiting physician or surgeon to any such receiving house. By Clause 11 the duration of the detention order in the receiving house made by the Justice is fixed at six weeks, but the period of detention may from time to time be extended by a Justice on the recommendation of any two members of the visiting committee, for any further period not exceeding three weeks at any one time. Clause 13 ensures provisions as to care, treatment, and visitation practically identical with those of the Lunacy Acts 1890-91. By Clause 14 patients can be removed from one receiving house to another.

The above are the chief clauses. Now is there any guarantee that the superintendent, who will also be resident medical officer of the receiving house, shall have been properly trained in the treatment of mental diseases in a public institution for the insane? Will the visiting medical staff appointed have had proper experience in the treatment of mental diseases in public asylums? As by Clause 11 acute mental cases can be detained in these receiving houses for treatment practically as long as the visiting committee, acting upon the advice of the medical staff, think fit, would the heart of the metropolis be suitable for these institutions? The scheme in reality means that these receiving houses *in* London are to be the acute hospitals for the insane and teaching centres for the medical schools, the present large asylums being utilised only for chronic cases. Few of us will admit that the acute insane can have their proper environment in the heart of the most populous city in the world. How are cases of acute mania and melancholia to be treated there? We know the value of rest in bed in certain acute cases of insanity, but where are the majority of the patients to have the benign influence of the sun, fresh air, and exercise? Where beneficent employment, recreation, outdoor and indoor amusements, so essential to successful treatment? Six years since, when visiting Glasgow with my committee, we found the authorities there had receiving houses for classification of the insane prior to distribution within the week to their various asylums. It is true a certain number of cases dependent upon drink recovered within seven days, but those receiving houses were not what these will be—hospitals for the insane where the patients can be detained for treatment six weeks, or even three months or more. The principle of the receiving house in London for classification is certainly right, but there should be no power of detention beyond from seven to fourteen days, which period would amply suffice for certain transient cases. I believe, however, that psychopathic hospitals on the outskirts of London for acute cases would be a boon for treatment and of benefit to students. We want facilities for treatment of incipient and unconfirmed insanity in the poorer classes, both as indoor and outdoor patients in our general hospitals, and as voluntary boarders and outdoor patients at the county and borough asylums. The out-patient department is an accomplished fact in several hospitals and asylums; the in-

patient wards for certain border-line mental cases is a desideratum. For many rate-paid imbeciles and chronic demented we ought to develop, under proper supervision, the boarding-out system so much in vogue in Scotland. True economy lies in this direction, and the reduced population in our rural districts should facilitate this undertaking.

From patients we turn to staff, and under this heading there are one or two points which demand our attention. In the first place the pension question is ever with us. Some of you will remember the great meeting of this Association held upon this question at Bethlem Hospital on May 16th, 1888. On that occasion I had the honour to lead a small—a very small—minority, who were opposed to the compulsory modified Civil Service scale of pensions. Well, we offered such persistent obstruction that we really won the day, and I venture to think you have reason to thank us for the uphill fight we successfully carried through. I said then, and I say it now, no absolutely fixed scale of pension is fair! Fix a minimum if you like, make that compulsory, and have a sliding scale for merit to the present permissive maximum. By that means, bad, indifferent, and good officers and servants will not all be treated alike. Power must be left in the hands of the visiting committees to regulate pensions according to merit. They will seldom do wrong. Those asylum officers who were most afraid in 1888 that the coming county councils would treat them badly in the matter of pensions, have realised in many instances their mistake, and the precedents already established must guide the near if not the distant future. It is to the interests of visiting committees and county councils alike to keep a service popular, and this can only be attained by the granting of liberal superannuation allowances on retirement to all those who have served them faithfully and well. Whatever is done for England and Wales in regard to pensions must be granted also to Scotland, Ireland, and the Colonies. In South Africa, where the Civil Service scale applies at present, I am told an agitation is proceeding to have ten years added to the individual's life as well as the ten years for special service. This would allow of retirement at fifty years of age. It is undoubtedly a move in the right direction, for few of those who have devoted their best energies to the care of the insane are equal to the constant strain of the work in the sixth decade of life. We

desire also a gratuity clause for deserving officers or servants, or for the widow or children of any deserving officer or servant who loses his life in the service.

The next point upon which I must speak is the dearth of applicants for the vacant posts of assistant medical officers at county and borough asylums. Twenty years ago there would be thirty or forty applicants for each vacancy ; now we get some seven or eight, or even fewer. Why is this ? It must be the office is less attractive than formerly, or is it that the additional year to the medical curriculum, the better pay obtainable of late for *locum tenens* work, and the many colonial attractions, have reduced the supply of candidates ? How is this dearth to be overcome ? Since the higher posts are limited in number, and but a small proportion of assistant medical officers can ultimately become superintendents, it seems to me only right that an assistant medical officer should be able to retire, say at the end of five years if he so desires, with a gratuity of £500, or at the end of ten years with one of £1000. This suggestion is very similar to what obtains in the army medical service. It would attract more young men of promise to our ranks, it would ensure them the wherewithal to buy a practice at a comparatively early age, it would disseminate throughout the country a more general medical knowledge of mental diseases, and it would protect assistant medical officers against remaining as such until at an age when only a small superannuation would await them. Similar and proportionate gratuities should be given to members of the nursing staff, male and female. This, I believe, is the custom in the post-office service on the marriage of their female clerks. Before leaving the rate-paid insane and their custodians, I would congratulate the Association upon the continued success of its scheme of training for nurses, male and female, and upon the enhanced value of the Medico-Psychological Nursing Certificate obtained after due examination. I am not a little proud that the City of London Asylum was in the van in this movement, for we commenced a systematic course of lectures and examinations for the nursing staff in 1887, and issued our own certificates in 1890, but abandoned these on the institution of the nursing certificate of the Association.

We now come to (b) the private insane. The only desiderata for the registered hospitals are—(1) the size of these

hospitals should be limited, and (2) their charity should be extended. The registered hospitals are doing a great work, but the control of large funds requires careful supervision. I would add that those of the registered hospitals with out-of-date buildings situated in populous districts should, in the interest of the patients, be moved into the country at the earliest possible date.

Next as regards licensed houses or private asylums. The Act of 1890 provided, as we all know, for the gradual extinction of these by competition. Under it no new licence can be granted, and there can be no addition to any existing licence. Those conversant with the demand for high-class accommodation know full well that the upper classes will not, as a rule, send their relations to public institutions, and therefore the best licensed houses will always be in request. The question then arises whether the time has not arrived for some alteration of the law in regard to these—an alteration which will admit, under proper safeguards, of the reception of an increased number of patients. Moreover the voluntary boarder system of treatment is so important, and has proved so valuable both for incipient and convalescing cases, that this system should be further encouraged by the voluntary boarders in licensed houses not being counted in the number for which each house is licensed, provided, of course, they do not encroach on the recognised accommodation. The voluntary boarder system should also be extended to county and borough asylums, both for private and rate-paid patients. At the present time several licensed houses receive rate-paid patients in large numbers. This is contrary to the spirit of the Lunacy Acts; it opens up the road to abuses, and is a condition demanding rectification by the Legislature at the earliest possible date. By the Act of 1890 the authorities in the counties and boroughs were encouraged to provide accommodation either in their asylums, or in annexes close thereto, for paying patients. There are nearly 250 such patients at the present time in the City of London Asylum. The reception of these patients has proved a great boon to the middle-class public, whose relatives in the past were frequently classed as paupers in order to be made admissible for treatment in county and borough asylums. It has, moreover, been of benefit to the institutions receiving them. We charge a guinea a week, and, in a few cases

requiring special care, two guineas. A first-class diet is given, and the balance on the maintenance goes to structural improvements and additional ornamentation of wards and gardens, whereby both private and rate-paid patients benefit. The paying patients are kept separate from the rate-paid as far as possible, but the infusion of the higher civilisation has levelled up the general tone and improved the moral and intellectual spirit of the institution. Many superintendents have said to me, "Don't you find the private patients an awful nuisance?" My reply has been, "They do give extra trouble, and their friends also; but the work is much more interesting with the cultured classes, and fully compensates officers, nurses, and attendants for the extra labour entailed." All paying patients are employed as far as possible—the gentlemen in the gardens, on the farm, in the workshops and wards; the ladies in house duties, needlework, etc.,—and I have been surprised to find how much work you can by force of example encourage these patients to do.

We are told there has been no increase in recent years in the number of certified patients in single care. This is a regrettable fact, and I think results from the large number of single cases treated, often by unskilled persons, privately and uncertified. Quite recently I dealt with this subject in a paper "Upon the Care and Treatment of Persons of Unsound Mind in Private Houses and Nursing Homes," a paper which elicited a very gratifying discussion, demonstrating clearly that serious legislative defects existed. The private insane ought to have the earliest possible skilled care and treatment under efficient official supervision. To ensure proper custodians and suitable environment all persons and houses receiving uncertified single patients should be subject to registration, and all such patients should be notified to the Commissioners in Lunacy, by whom or their deputies they should be systematically visited. The voluntary boarder system should be extended to these registered houses both for incipient cases and for convalescing patients on their discharge from certificates. The chief custodian of every patient should be held legally responsible for proper care and treatment, and if culpably negligent or inefficient should be liable to prosecution. Lastly, a large addition to the Lunacy Commission by the appointment of deputy or district commissioners to carry out the necessary work of supervision is urgently needed.

Let us all agitate for the removal from the statutes and discontinuance from general use of the terms lunatic, lunacy, asylum (when applied to a mental hospital for curable cases), attendant, and airing courts ; person of unsound mind, insanity, mental hospital, male mental nurse, and gardens taking their places.

Finally, let us ever remember that we are the officials and custodians of a great trust, that our life-work is a noble one with vast possibilities for good or evil, that the State very rightly safeguards the insane community on account of its utter helplessness, and that the advance in treatment for which we are all striving will more certainly be gained by the application of sure and steady methods founded upon experience and directed upon scientific lines, rather than by the reckless experimentation of the inexperienced upon defenceless patients. As the navigators of bygone centuries in seeking their Eldorado were encouraged from day to day by the discovery of some new island, which led them ever onward on the boundless seas to fresh lands and fields of adventure, until at last the continent of their dreams lay before them, so may we, urged onward by a strict sense of duty, and with a full appreciation of our noble sphere of labour, by patiently pursuing proper methods of scientific research and clinical investigation, hope to solve the hidden mysteries of the origin, prevention, and cure of the greatest of all human ills—insanity.

Dr. BLANDFORD.—I have great pleasure in proposing, and I am sure you will have equal pleasure in awarding, the best thanks of the Association to our President for his very able and suggestive address. It is not our custom to discuss the address of the President, and I have no intention of doing so on this occasion. I would, however, with your permission, make one remark. I was extremely glad to hear him draw your attention to that Bill which is now before the House of Lords ; I do not think it has yet got before the Commons. I am pretty confident that what he said with regard to that Bill is strictly correct ; that it is a resuscitation of the old proposition that came up from the London County Council in the year 1890, but which fortunately failed altogether and never became law. You may remember that the chief provision was that the physicians who were to have supervision of the home or homes were to have had no experience whatever of the care and treatment of the insane.

Dr. OUTTERSON WOOD.—It affords me personally the very greatest pleasure to have been asked to second this vote of thanks to our President for his address. I think that his masterly and extremely practical paper, to which we have all listened with so much pleasure, is the best proof we could have that we have elected a man as our President who will fulfil the duties of his office with credit to himself and with satisfaction to the Association.

The motion was received and passed with applause.

The PRESIDENT.—I thank you very heartily for this expression of your approval. It will be my earnest endeavour during my year of office to faithfully discharge the duties of the position in which you have placed me.

A Revision of the Statistics presented by the Committee on Tuberculosis.

THE attention of the Council having been called to a statement that errors existed in the Statistical Tables prepared by the late Tuberculosis Committee, the Council inquired into the subject, and finding, as a matter of fact, that such errors did exist, decided to place the Tables in question in the hands of a statistical expert for detailed examination and Report. Dr. Chapman, late Medical Superintendent of Hereford City and County Asylum, whose reputation as a statistician is well known, most kindly, at the request of the Council, undertook the work, and the Council feels that the Association is greatly indebted to Dr. Chapman for so freely placing his talents and time at its disposal.

REPORT BY DR. CHAPMAN.

The Council of the Medico-Psychological Association, having found that certain of the statistical tables and calculations in the Report of the Committee on Tuberculosis presented in 1902 contained clerical and other errors, requested me to revise the figures, and I have undertaken the duty.

The schedules used by the Committee on Tuberculosis were placed in my hands, and I have gone through them with some care. I have not re-calculated every figure in the Tables, but have done so when any doubt arose. The revision submitted does not in any way traverse any conclusions and recommendations contained in the Report of the Committee on Tuberculosis, but, on the contrary, in several directions supports them more strongly.

The tables now submitted are—

Table A, substantially as in the Report of the Committee on Tuberculosis.

Table A₁, giving in somewhat fuller detail the summary represented by Table A* of the Committee on Tuberculosis.

Table A₂, giving the totals on which Table A₁ is calculated.

Table B, differing from that of the Committee on Tuberculosis in the asylums being classified by their tubercular death-rates for five years and not on the tubercular death-rate

for 1899. They are classified into a "better" (*re* tuberculosis) and "worse" division, according to whether the rate does not or does exceed 2 per cent.

Table B₁ summarises Table B.

Table C, giving a tabulation for English county and borough asylums of the relation of admitted to indigenous cases of tubercle.

It may be noted that in Tables A, A₁, A₂, and C, the subject-matter being patients, the unit of calculation is the individual patient; whilst in B the subject-matter is asylums, and the individual asylum is the unit of calculation. Each asylum is a separate experiment, and it is practically immaterial whether the experiment is made on 250 or 2500 patients. Chance fluctuations in the small asylums and a want of homogeneity in the larger ones may reduce the accuracy of the figures, but do not affect their relative value, which must be assumed to be equal.

The table on p. 23 (p. 415 of JOURNAL) of the Committee's Report should read as follows:

In England:

	Average.
1. { Dement and Imbecile }	8 $\frac{3}{4}$
2. Mania	4
3. Melancholia	3 $\frac{1}{2}$
4. General paralysis	1 $\frac{3}{4}$
5. Epileptic	2 $\frac{1}{4}$

In Scotland:

1. { Dement and Imbecile }	3 $\frac{1}{2}$
2. Mania	2 $\frac{1}{4}$
3. Melancholia	2 $\frac{1}{4}$
4. Epileptic	$\frac{3}{4}$
5. General paralysis	0

In Ireland:

1. Mania	7
2. { Dement and Imbecile }	4 $\frac{3}{4}$
3. Melancholia	4 $\frac{1}{4}$

This portion of the statistics is of little interest, as there are no correlative figures to give them any meaning.

The effect of size has also been re-calculated in Table D, using the five years' tubercular death-rate instead of that for 1899. The results are substantially the same as those already given in Chart II.

One or two points as to which these figures emphasise or vary the conclusions gathered from them by the Committee on Tuberculosis may be referred to.

Table B₁ shows as to sites that the "better" asylums have a "good" soil in fully two cases out of three, whilst the "worse" have a "bad" soil in three cases out of four. This result varies in each subdivision, but is only contradicted in the case of the "better" Scotch asylums, where only three out of seven have a "good" soil.

The broad result here is so pronounced that the value of a "good" soil can hardly be doubted.

The hours spent in the open air are greater in the "better" asylums throughout each of the five groups, the total figures for seventy asylums giving 6·6 hours for the "better" and 5·8 for the "worse"—a difference of 14 per cent. in favour of the better asylums.

As to day space, the "good" asylums have fractionally greater space, viz., by thirteen feet. It is not so in every group, and the total difference of thirteen feet is too small to found any strong conclusions upon.

As to night space, the "good" asylums are better by forty-seven feet, nearly 8 per cent.—quite an appreciable and significant quantity; only in the borough asylums (seven in number) are there contrary figures.

Abundant space would appear to be more important at night than by day, probably because more continuously occupied.

Ventilation: in the "good" asylums artificial and natural ventilation are about equal, in the "worse" as three to seven—ratios distinctly in favour of artificial ventilation.

Scotland votes to the contrary by six to one. Were Scotland omitted, then the "better" asylums vote fifteen to twelve in favour of artificial ventilation; the "worse" are in favour of natural by more than two to one (twenty-one to nine). This is very strong evidence that natural ventilation is insufficient. It may be noted that the Scotch asylums all have large night space, averaging 814 feet against an average of 680.

Tables C and C₁ tabulate figures given in the collected schedules, which, though collected with an obvious prevision of their value, were not reported by the Committee on Tuberculosis. They refer to the extent to which tubercle was detected on admission amongst the patients who died from tubercular disease in 1899.

These figures may be studied from various points of view. Though in some few schedules the facts are not given, and in a few others appear to have been given without much investigation, they are on the whole apparently trustworthy.

They refer entirely to the deaths in 1899, and say nothing of patients suffering on admission from tubercle who recovered, nor of those who acquired tubercular disease in the asylums but did not die.

The figures show that for every 100 cases admitted (and finally terminating fatally), 375 originated in the asylums.

It appears also that in the asylums with a higher tubercular death-rate a larger number were admitted with tubercle than in the "better" asylums. There is nothing to show how far this is due to the number of tubercular admissions being larger, or how far simply to fewer recoveries amongst them: we know that in some asylums tubercular cases do recover in considerable numbers.

The further remarkable fact comes out that in the "worse" asylums, though the admitted cases are more numerous, the indigenous are still more so.

In English county and borough asylums, in 30 "better" asylums (omitting fractions and using round numbers), where 5 cases are admitted 17 cases occur in the asylum; whilst in 24 "worse" asylums 9 cases instead of 5 are admitted; but the indigenous cases are not 17 as in the "better" asylums, nor 31, which would be proportionate to the 9 admissions, but 38. If the 9 "worst" be taken, then the admissions are 10; but the indigenous cases are not 17, nor 38, nor 42, as they would be if proportionate to the ratio in the "worse" asylums, but no less than 56.

In the remaining asylums—English, Scotch, and Irish (only twenty-four in number)—the admissions are much the same in each group, the excess in the "worse" asylums being entirely due to indigenous cases.

Whatever detailed interpretation we may make of these

figures, their broad meaning is clear, and that is that the more tubercle there is the more there will be.

Their practical teaching, therefore, is most unmistakably that the segregation of infected individuals is an imperative necessity.

As to other practical points, the well-known value of an open well-drained soil is so fully illustrated that it must be more attended to in the future selection of sites for asylums; and though asylums now existing cannot be moved, it deserves the fullest inquiry in every case whether more might not be done by deep subsoil draining to improve the condition of asylums on heavy soils.

The association of natural ventilation with open fires is more frequent in the "worse" asylums. This may mean to some extent that these are older asylums, and may on that account be more liable to tubercular infection. But we must associate the fact that natural ventilation is much more usual in the worse asylums, with the significant exception of the Scotch asylums, which have natural ventilation but a very large night cubic space.

The practical deduction is that natural ventilation appears to be inefficient unless assisted by large cubic space, with especial reference to night conditions, when it probably often happens that warmth is maintained and draughts avoided by checking ventilation to a dangerous extent.

Although it may be unnecessary to give a detailed tabulation, it seems desirable to present some comparison of the ordinary rate of mortality with the tubercular death-rate. For this purpose the first fourteen (omitting two of under five years' existence) county asylums in Table B, having a tubercular rate not exceeding 1·5 per cent., are compared with the last fifteen in the same table, with a tubercular rate of 2·5 or over.

The figures are—

	Average number resident.		Average deaths.		Average tuber- cular deaths.		Total deaths per cent.		Tubercular deaths per cent.
First 14 .	13,924	...	1216·4	...	185·6	...	8·7	...	1·3
Last 15 .	15,385	...	1773·8	...	530·8	...	11·7	...	3·5

If the tubercular deaths be subtracted, then the two groups contrast with an ordinary death-rate not of 8·7 and 11·7, but of 7·4 and 8·2—a difference of only 0·8 per cent. This 0·8 per cent., however, must be still further reduced, since an exa-

mination of the schedules shows that in a good many cases the tubercular deaths (not so certified) are but imperfectly returned, especially in the earlier years. The correction for this would probably be greater in the last than in the first group by something like the proportion of 3·5 to 1·3. It is also tolerably certain that when tubercle is in excess, either actual tubercle or the causes favouring it would increase the death-rate without actually existing active tubercle at the date of death.

With a very moderate allowance for these two circumstances the 0·8 would be much diminished, and it would appear that the difference of 3 per cent. in the death-rates of the two groups (one third more than that of the "better" group) is entirely, or almost entirely, due to the presence of tubercle and its causes.

The figures of the two Staffordshire asylums are sufficiently exceptional to suggest they should be eliminated. The result, however, is the same; without them the mortality of the second group becomes 10·9, with a correction for tubercle of 2·8, making the two groups 7·4 and 8·1 respectively, or a difference of 0·7 instead of 0·8 as before. The Staffordshire asylums alone give a similar result, the general mortality without tubercle being high, but not remarkable, viz., something like 10·5.

The inference from these facts seems to be that apart from tubercle the general health of the patients in both groups is not far from identical, and that the tubercle can hardly be due to any essential difference in the patients in the two groups of asylums, and cannot have any special connection with insanity,⁽¹⁾ but is causally associated with the individual asylums.

Though the statistics give some very definite indications, they fail to completely solve most of the questions they raise. For example, under present conditions it would appear that six and a half hours in the open air is more efficient in avoiding tubercle than merely six hours. There can, however, be little doubt that if infective cases were isolated, and ventilation and cubic space satisfactory, as much as even six hours would be by no means essential to a low tubercular rate. Probably if night space were 2500 feet, grave defects of ventilation, etc., would be comparatively innocuous, and so on. The practical question is, What is a necessary minimum in each of these

items, so that the combined effect shall be elimination of tubercular disease at a minimum cost?

There is nothing to show that if isolation were efficiently enforced the mass of the "better" asylums, at least, are not adequately equipped in most of the other respects already.

A fuller statistical inquiry than the present would probably confirm and define more clearly any conclusions that the present one points to, but would probably not alter them to any material extent. Further light might be got—and this course seems decidedly suggested by the relations shown between imported and indigenous cases—by a careful examination and comparative study of the conditions prevailing in a selected few of the "better" and "worse" asylums.

No analysis has been made of the dietaries. A careful comparison of the dietetic conditions in, say, five (or ten) of the "better" and as many of the "worse" asylums, both from a *table d'hôte* and from a laboratory standpoint, would have some value.

The following appear to be the most important deductions from the statistics:

1. That infection is one of the strongest causative elements in the prevalence of tuberculosis in asylums.
2. That a healthy (dry and well-drained) site is of extreme importance. The value of a good site is well known, but asylum authorities do not appear to be aware that it is so great as these statistics show.
3. The causes of tuberculosis in asylums inhere in the asylums themselves, and not in the character of the patients sent to them. This must be very generally true, since the exceptions, and possibly very marked exceptions, that individual asylums no doubt present, make so little mark on the statistics.
4. That time spent out of doors, cubic space indoors, ventilation, etc., all appear on the side of the account one would expect, but by margins usually too small to be very significant. It would seem that probably all these are inadequate, even in the "better" asylums, for the proper treatment of tuberculosis, but that, on the other hand, they are possibly sufficient even in the "worse" asylums if tubercular taint be absent. The only detail hinted with any definiteness is that,

with our present habits and prejudices, due ventilation can hardly be obtained without artificial means and artificial heating in dormitories giving less than 800 feet per head.

T. A. CHAPMAN.

Addenda and Errata.

I ought to have mentioned that the "average hours outside" are the sum of the hours spent "in airing courts" and "beyond airing courts," and that the eccentricities of the figures appear to be due to the schedules having been so filled up that the figure is in most cases really an "average hours outside," in others is the sum of the maximum spent in airing courts by some patients and of that spent outside them by others. It is, however, impossible to say which is which in more than a few cases, and it is necessary to assume that the aberrant figures balance one another. It is quite possible, of course, that they do not.

I may also mention an opinion I have formed that the uncertain result of the day space figures, which equally appears, however they may be manipulated, is due to day space being adequate in practically all cases. This one would perhaps anticipate from its being so varied by visits to dining hall, chapel, amusement room, etc., by time spent out of doors, and by its conditions being well supervised by the visits of officers, etc.

In the 8th line of Report I ought to have said that in Table A I have re-calculated the totals in almost all cases, but not the M. and F. separately, nor other figures that I did not further use. There had been nothing to raise any doubts as to these being correct; there are, however, I find, a few requiring correction, as well as some errors of my own. Of the latter none affect results. The transposition of 22 and 23, col. 3, Table A, might have done so, but the figures happen to be nearly alike, and, as it happens, are correct in Table B where they signify.

ERRATA.

Table A—

			M.	F.	Total.
Group 1, col. 2	6. Bodmin	should be	8'0	7'4	7'7
	21. Leicester	"	12'5	8'3	10'2
	23. Banstead	"	13'9	5'4	8'6
col. 3, 22 & 23.	Totals want transposing:				
	22 = 2'0				
	23 = 1'8				
col. 4	39. Brookwood	should be	11'7	7'0	9'0
	46. Wakefield	"	11'2	6'0	8'6
col. 5	30. Morpeth	"	4'0	4'0	4'0
	39. Brookwood	"	3'1	1'9	2'4
	46. Wakefield	"	3'0	0'7	1'8
Group 2, col. 2	12. Warneford	"	6'8	2'4	4'4
col. 3	"	"	1'5	0'0	0'7
	16. Broadmoor	"	0'6	0'1	0'4
col. 5	17. Earlswood	"	1'9	2'8	2'2

Table A (<i>continued</i>).			M.	F.	Total.
Group 3, col. 1	8. Midlothian	F. resident	114.		
col. 2	4. Perth	should be	6.5	4.4	5.5
col. 3	"	"	0.6	0.4	0.5
Group 4, Note †, 1898, not 1888.					
Table A ₁ , col. 2	4. Ireland	"	6.8	7.4	7.1
Table B ₁ , Div. 1, hours outside, English Counties			6.1.		
		Total	6.3.		
2,	"	"	5.9.		

(1) Phthisical insanity is, of course, but a small component in these figures.

Clinical and Experimental Observations on Katatonia.

By LEWIS C. BRUCE, M.D., Physician Superintendent, Perth District Asylum, Murthly; and A. M. S. PEEBLES, M.B., Assistant Physician, Perth District Asylum, Murthly.

THE following observations were made by my assistant (Dr. Peebles) and myself with the object of observing the physical symptoms of katatonia and hebephrenia. As the result of these observations we were led to make some experiments in the way of treatment, and we combined with this work some experimental observations on rabbits.

We have had under observation twelve cases of katatonia—ten women and two men,—but we have been able to observe only three cases of hebephrenia. We are therefore only in a position to place before you to-day our work on katatonia.

Physical Symptoms of Katatonia.

The history of the disease in our cases was quite in line with the classical descriptions of Kahlbaum and Kraepelin. Hereditary predisposition was present in six out of the twelve cases. In some the habits were vicious and drunken, in others the habits of life were good, and as the course of the disease ran typically in both classes, it is hard to believe that the defective habits did more than lower the resistive power of the individual, and were therefore only a predisposing cause. Three of the patients had suffered from previous mental attacks; in one of these cases at least the previous attack was one of katatonia, which was apparently completely recovered from. In every case the origin of the illness was gradual and insidious.

Compiled from Schedules.

* P.M.'s for 1897 only.

LES.

NAVAL, CRIMINAL, AND IDIOT ASYLUMS.

	5		5A	6				7							
	Ratio per cent. to Daily Residents DEATHS from TUBERCLE. 1899.		Com- parison of 1899 with Av. of 5 yrs.	Average length of RESIDENCE in Asylums of these Cases (Column 5).				FORM OF INSANITY at DEATH of these Cases dying in 1899 (Column 5).							
	F.	Total.		M.		F.			G. P.	Man.	Mel.	Ep.	Dem.	Imb.	Other forms.
				Yrs.	Mos.	Yrs.	Mos.								
BRI	1'5	2'3	+ '4	6	9	7	2	{ M.	6	1	...	2	2	1	
DE								{ F.	1	...	1	1	2	1	
LEI	2'3	1'8	- '6	0	7	6	0	{ M.	2						
LO								{ F.	1	3					
YON	'7	'7	- '3	3	6	5	0								
NEV	...	'4	- '1	6	3	...	...	{ M.	1	1					
NOT	4'	3'2	+ '8	1	1	0	8	{ F.	...	...	...	1	1	...	1
PLY	'8	3'2	+ '2	2	3	4	10	{ M.	6	1	3	1	3		
NOI	1'4	1'7	+ '5	2	3	6	1	{ F.	...	...	1	...	...	1	
SUN	2'6	1'5	- '5	...	...	6	1	{ M.	3	2	1				
	'6	1'7	+ '3	6	3			{ F.	1	1	...	...	3		
	1'8	3'	+ '3	3	0	2	0	{ M.	...	...	2	...	1	1	
								{ F.	...	...	2	...	1		
GLC	1'	'6	+ '1	...	...	26	0	{ M.	...	...	...	...	1		
OXF	...	...	- '1					{ F.	...	...	...	...
DAR	'8	'7	- '1	10	11	8	1	{ M.	...	1	...	...	...	7	
WA	2'8	3'8	+ '8	8	0	9	0	{ F.	...	...	...	...	2	5	
								{ M.	...	2	...	6	16	18	
								{ F.	1	...	...	4	17	8	
NAV															
YAR	...	2'6	+ 1'5	8	0	...	...	{ M.	4	...	...	...	1		
BER	...	...	- '3					{ F.							
RED	2'8	2'3	- '1												
Average for 12 Asylums=								{ M.	1'9	'7	'5	'9	2'	2'2	
Total..								{ F.	'3	'4	'6	'5	2'3	1'5	
								=	2'2	1'1	1'1	1'4	4'3	3'7	

‡ P.M.'s for 1897 only.

ROYAL	5		5A	6				7							
	per cent. to Daily Residents with TUBERCLE. 1899.		Com-parison of 1899 with Av. of 5 yrs.	Average length of RESIDENCE in Asylums of these Cases (Column 5).				FORM of INSANITY at DEATH of these Cases dying in 1899 (Column 5).							
	F.	Total.		M.		F.		G. P.	Man.	Mel.	Ep.	Dem.	Imb.	Other forms.	
ROYAL.				Yrs.	Mos.	Yrs.	Mos.								
1. A	1'5	1'9	+ '7	5	11	5	3	{ M.	...	1	2	1	3	2	
								{ F.	...	...	1	2	4		
2. E	1'3	1'6	- '3	2	11	1	6	{ M.	...	3	3	1	...	...	1
								{ F.	...	1	4	...	...	1	
3. M	1'3	2'2	+ '1	13	0	8	9	{ M.	...	3	3	...	...	3	
								{ F.	...	3	...	...	1		
4. Pe	1'9	2'4	+ 1'9	1	0	0	½	{ M.	...	...	...	...	1	...	1
								{ F.	...	1	...	...	...
DISTRICT															
5. G	2'6	2'1	+ '8	1	7	1	6	{ M.	...	1	...	1	2		
								{ F.	...	3	...	...	2	...	1
6. In	1'8	2'1	- '6	6	6	2	6	{ M.	...	...	3	1	2	1	
								{ F.	...	...	1	...	3	...	1
7. La	'7	'9	Avg.	2	3	0	3	{ M.	...	1	...	2	1		
								{ F.	...	...	...	...	1		
8. M	1'9	1'3	+ '5	0	4	6	4	{ M.	...	...	1	...	...
								{ F.	...	...	1	...	...	1	
9. Pe	'6	1'8	+ '4	1	8	2	0	{ M.	...	...	...	1	2	2	1
								{ F.	...	...	...	...	1		
10. R	1'9	2'6	+ 0'9	8	11	1	10	{ M.	...	3	1	...	1		
								{ F.	...	1	2	...	...
Average for 10 Asylums =								{ M.	...	1'2	1'3	'7	1'2	'8	'3
								{ F.	0	0'9	'9	'2	1'2	'2	'2
Total.....								=	0	2'1	2'2	'9	2'4	1'0	'5

.M.'s recorded.

DISTRICT	5		5A		6				7						
	Percent. to		Com-		Average length of				FORM OF INSANITY at DEATH of these						
	Residents		parison		RESIDENCE				Cases dying in 1899						
	from		of 1899		in Asylums				(Column 5).						
	TUBERCLE.		with Av.		of these Cases										
	9.		of 5 yrs.		(Column 5).										
	Total.				M.	F.			G. P. Man.	Mel.	Ep.	Dem.	Imb.	Other	forms.
					Yrs. Mos.	Yrs. Mos.									
1. B...	1'6	+ '7	4	7	1	0			M. ...	4	2	...	1	1	
2. C...	3'4	+ '4	3	0	2	6			F. ...	2	2	...	2	1	1
3. L...	4'6	+ 2'1	7	0	5	0			M. ...	10	5	1	4	1	
4. M...	2'	- '2	9	1	5	3			F. ...	15	8	...	7		
5. W...	2'2	+ '7	4	0	9	0			M. ...	1	3	...	3	1	
6. W...	1'4	+ '4	7	6	...	...			F. ...	2	3	1	2		
									M. ...	4	1	1	2		
									F. ...	2	...	...	1		
									M. ...	2	1	...	1	2	
									F. ...	2	1	...			
7. D...	'6	+ '3	4	6	...	...			M. ...	...	1				
									F. ...						
Average for 6 Asylums =									M. ...	3'5	2'1	'3	1'9	'7	
									F. ...	3'5	2'1	'1	2'	'2	'2
										7'	4'2	'4	3'9	'9	'2

‡ P.M.'s for 1899 only.

	5		6		
	Cases from TUBERCLE. 1899.		Sum of lengths of Resi- dence of Cases in Column 5. Years.		
	F.	Total.	M.	F.	Total.
I. ENGL CO	635	1,242	3410'3	3892'0	7302'3
B	32	84	195'5	150'1	345'6
	667	1,326	3605'8	4042'1	7647'9
H	44	106	624'0	411'7	1035'7
	711	1,432	4229'8	4453'8	8683'4
II. SCOT R	36	91	311'4	118'2	429'6
III. IRELA D	70	131	317'0	257'0	574'0
	817	1,654	4858'0	4829'0	9687'0

NTY

E

NTY ASYLUMS.

DIVISION II.

E	1	2	
	Tubercle death-rate.	Height above O.D.	
...	2'1	—	He
...	2'1	—	
...	2'1	250	
...	2'3	—	
...	2'3	—	
...	2'3	600	

10
Milk sterilised.
No
Yes
No
No
Yes
Yes

ETC., ASYLUMS.

ON 2.—*Tubercular Death-rate = 2'0 to 3'1.*

ELEVEN ASYLUMS.	3	4	5		6	7	8	9	10
	Soil.	Average hours outside.	Cubic space.		Character of population.	Ventilation.	Heating.	How floors are cleaned.	Milk sterilised.
			Day.	Night.					
LONDON (City). 4. Stone .	Clay	4	600	700	Urban	—	Both	Both	No
LEICESTER. 3. Humber stone	Clay	9	492	800	Urban	Artificial	Open fires	Polished	Yes
NOTTINGHAM (City). 7. Mapperley	Clay	5	600	650	Urban	Artificial	Artificial	Both	No
NORWICH. 9. Hillesdon									
BRISTOL. 1. Fishponds.	Heavy clay	7	—	—	Urban	Natural	Artificial	Polished	No
PLYMOUTH. 8. Ivybridge .									
OXFORD. 12. Warneford	Clay	—	—	500	Mixed	Artificial	Open fires	Both	Yes
BERKS. 16. Broadmoor									
GLOUCESTER. 11. Barnwood House	Gravel and clay on chalk	5	—	—	Mixed, imbecile, and infirm	Natural	Both	Both	Yes
MET. DISTRICT, DARTFORD. 13. Darenth									
YARMOUTH. 15. Royal Naval									

YLUMS.

ON II.—*Tubercular Death-rate* = 2'0 to 2'7.

REF. ASYLUM.	3	4	5		6	7	8	9	10
	Soil.	Average hours outside.	Cubic space.		Character of population.	Ventilation.	Heating.	How floors are cleaned.	Milk steri- lised.
			Day.	Night.					
4. Mu Ro	Clay on rock	5½	600	720	Mixed	Artificial	Both	Polished	—
8. Midl									
7. Lan	Gravel and clay	3½	360	800	Agricul.	Both	Artificial	Polished	No
ABER 1. Roy									
5. Gov									
9. Perth									
6. Roxb									
EDINB 2. Roy									

ASYLUMS.

SECTION II.—*Tubercular Death-rate*

	2	3	4	5		6
Height above D.	Soil.	Average hours outside.	Cubic space.		Character of population	
			Day.	Night.		
7.	20	Sandy loam	—	280	525	Agricu
1.	—	Damp	4	400	600	"
6.	—	Gravel on brown stone	3	360	600	"
5.	—					

	Floor.	Milk.		
	Scrubbed.	Steri- lised.	Not.	
Englis	2	7	13	
Englis	1	1	3	
Englis	—	1	4	
Scotch	—	—	3	
Irish d	—	1	2	
To	3	10	25	

Englis	4	4	14	
Englis	—	1	3	
Englis	—	2	—	
Scotch	—	—	1	
Irish d	—	1	1	
To	4	8	19	

TABLE C.

Showing the relation of admitted to total cases dying of Tubercular disease in 1899, English County and Borough Asylums.

	I. Total average number Resident, 1899.			II. Admitted Tubercular cases died in 1899.			III. Total Tubercular cases died in 1899.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
30 Asylums, with rate not exceeding 2'	12,646	17,304	29,950	56	50	106	214	256	470
24 Asylums with rate over 2'	11,001	12,098	23,099	73	72	145	399	361	760
9 (of above 24) with rate over 3'	4,059	4,309	8,368	30	25	55	203	178	381
54 Asylums .	23,647	29,402	53,049	129	122	251	613	617	1230
	Column III per cent. of Column II.			Per mille Resident.			Per mille Resident.		
	M.	F.	Total.						
30 Asylums .	382	512	443	4'4	2'9	3'5	16'9	14'8	15'7
24 Asylums .	545	501	524	6'6	6'0	6'3	36'3	29'8	32'9
9 Asylums .	677	711	693	7'3	5'8	6'6	50'0	41'3	45'5
54 Asylums .	475	506	481	5'4	4'1	4'7	25'9	21'0	23'2
78 Asylums (in- cluding those in C ₁) . . .	459	499	475	5'4	4'2	4'8	24'8	20'8	22'7

TABLE C.

Showing the relation of admitted to total cases of Fatal Tuberculosis in 24 English, Scotch, and Irish Asylums not included in Table C.

	I. Total average number Resident, 1899.			II. Admitted tubercular cases died in 1899.			III. Total cases of Tuber- culosis fatal in 1899.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
17 Asylums with tuber- cular death- rate not ex- ceeding 2 per cent. (5 years' aver- age) . . .	4,893	4,034	8,927	29	16	45	75	46	121
7 Asylums with rate over 2 per cent. . .	3,375	3,266	6,641	16	16	32	103	103	206
None of these exceed 3 per cent.									
24 Asylums .	8,268	7,300	15,568	45	32	77	178	149	327
	Column III per cent. of Column II.			Per mille Resident.			Per mille Resident.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
17 Asylums .	258	287	269	5'9	4'0	5'0	15'3	11'4	13'6
7 Asylums .	644	644	644	4'7	4'9	4'8	30'5	31'5	31'0
24 Asylums .	395	465	425	5'4	4'4	4'9	21'5	20'4	21'0

TABLE D.

Effect of size of Asylum on Death-rate from Tubercle.
(5 years' average.)

Size of Asylums.	English County and Borough Asylums (59).			All Asylums in Tuberculosis Committee Report.			
	No. of Asylums.		T. rate per 1000.		No. of Asylums.	T. death-rate per 1000.	
Under 300 .	5	...	16	...	13	...	11
300 to 500 .	10	...	20	...	14	...	18
500 to 700 .	11	...	22	...	16	...	21'5
700 to 900 .	11	...	23	...	14	...	22
900 to 1100 .	9	...	23	...	10	...	23
Upwards .	13	...	23	...	16	...	23
	<hr/>		<hr/>		<hr/>		<hr/>
Totals and mean	59		22		83		20

Loss of energy, listlessness, and nutritive failure were invariably present. Then hallucinations of hearing of a distressing nature appeared, leading to impulsive actions, or delusions, or to paroxysms of fear with complete loss of self-control, which necessitated hospital treatment.

Out of the twelve cases, nine women and one man were adolescents. Of the other two cases, one, a woman, was over thirty years of age, and the other, a man, was over forty years of age ; and yet the disease was absolutely typical in both.

On admission all the adolescents were poorly developed and poorly nourished. The two older cases were both well developed, but their body-weight was below par.

For convenience of description we have divided the disease into two stages : (1) the stage of acute onset ; (2) the stage of stupor terminating in recovery or complete or partial dementia.

The physical symptoms of the stage of acute onset were as follows:—The alimentary system was disordered in every case. There was no desire for food, often no thirst. Vomiting after food was common. The heart's action was frequently rapid, irritable, irregular, and intermittent. The arterial pressure gradually rose until the acute stage terminated. The skin during mental paroxysms poured with perspiration ; blotchy and pustular rashes were present in 50 per cent. of the cases. No deficiency of urine or urea was noted in any case. Each of the women patients menstruated once during the period of acute onset, and then ceased to menstruate until recovery or dementia terminated the disease. Dulling of sensibility to touch, heat, and pain was very common. The pupils were always dilated and sluggish in their reaction to light. The special senses of sight and hearing were not affected so far as outward impressions were concerned, but taste and smell were often completely disorganised : two patients mistook strychnine for sugar, and at least five of the cases were unaffected by strong ammonia. In every case the organic reflexes of micturition and defæcation were not under the control of the patient ; these cases always tend to be wet and dirty. The skin and tendon reflexes were exaggerated. At uncertain intervals the voluntary muscles passed into a state of katatonic spasm, which lasted variably for a few minutes or hours.

The mental state was essentially one of confusion. Vivid auditory hallucinations, always of a distressing nature, were

present in every case. There was an appearance of preoccupation and fixed attention in these cases as they sat up in bed listening intently. Or they would suddenly run to windows or doors in response to imaginary voices. Very frequently these hallucinations led to paroxysms of terror, when the patient shouted and struggled and perhaps tried to jump through a window, run out of the door, or hide under the bed. In the intervals between paroxysms the patients might lie for hours with eyes closed, apparently oblivious to all around. In other cases, again, there were brief periods of sanity, but the patient had always a confused appearance, and was soon exhausted if spoken to. The power of continuous attention was gone. There was no memory of what occurred during the acute stage. Sleep during this period was deficient. The temperature was irregular, sometimes slightly febrile in the evening, sometimes paradoxical. In 50 *per cent.* of the cases the acute period terminated in a distinct febrile attack. Leucocyte counts during this stage showed a moderate persistent leucocytosis, the increase being chiefly in the polymorphonuclear and large mononuclear elements. Coincidentally with the febrile attack, or if the febrile attack was wanting, the stuporose or second stage was ushered in by a high leucocytosis, the increase being in the polymorphonuclear cells. Chart No. 1, illustrating the first stage of the disease, shows the temperature, pulse, and leucocytosis per c.mm. of blood. It will be noticed that the acute stage terminated in a sharp fever, that coincidentally the leucocytosis rose to 68,000 per c.mm. of blood. At the termination of the acute stage the patient may pass into a typhoid state; only one out of our twelve cases presented this symptom. Bacterial examination of the blood was made in eight cases. The method adopted was to run 3 to 4 c.c. of blood into 200 c.c. sterile broth by means of an exploring needle passed into any prominent vein in the forearm. Five of the flasks were sterile. Three contained organisms. Two of these were apparently accidental contaminations, but the third, obtained from the case which had passed into a typhoid state, presented a pure culture of a short streptococcus. The patient recovered from the typhoid state and passed into stupor. On testing the agglutinative power of her blood upon this streptococcus, we found that in a dilution of 1 in 30 with a broth culture of the organism, agglutination was complete in

LEUCOCYTES
C.M.M. OF BLD.

Fahr
105

22,000 104

20,000 103

18,000 102

16,000 101

14,000 100

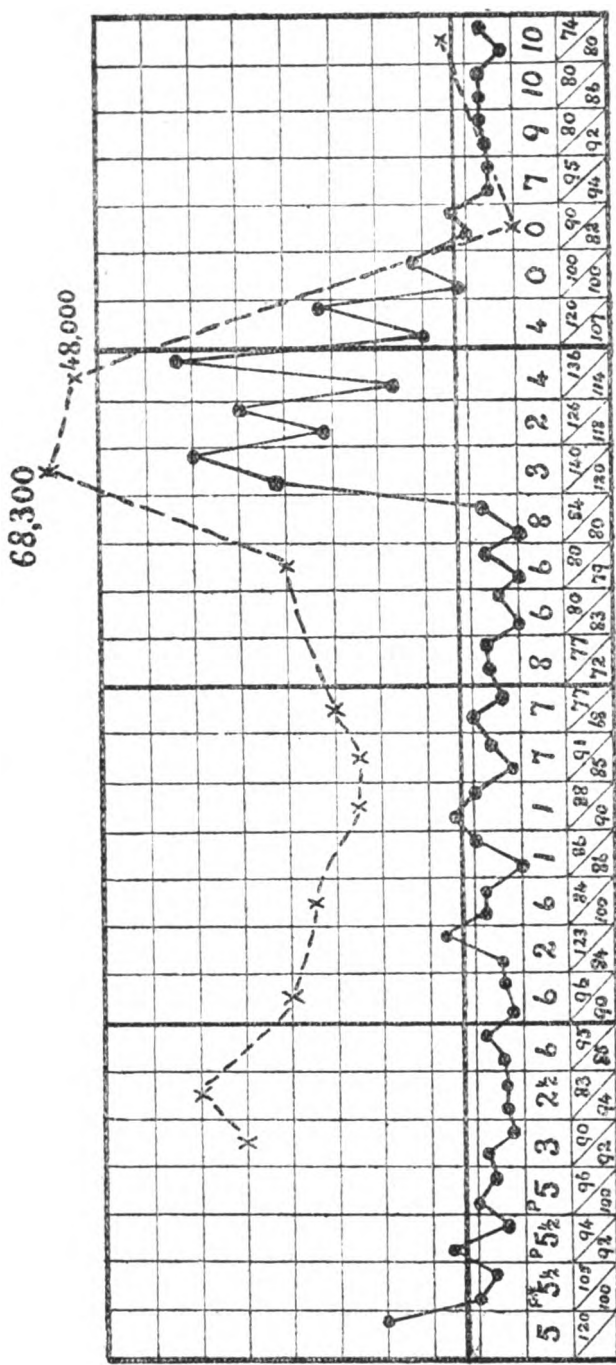
12,000 99

10,000 98

8,000 97

SLEEP.
PULSE.

CHART I.

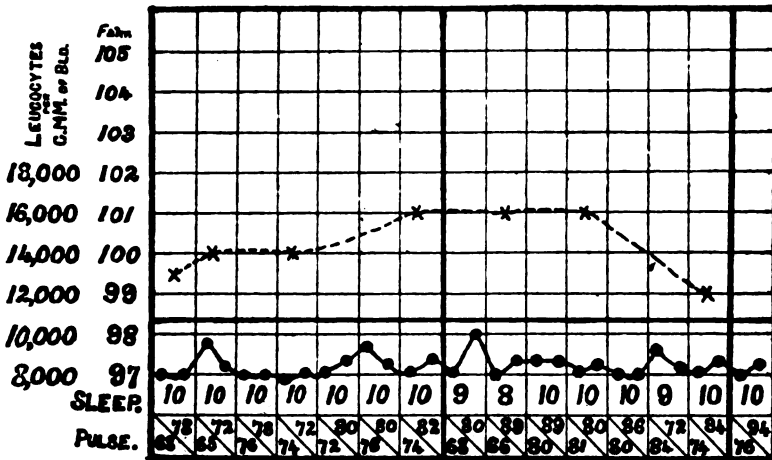


two hours. Control normal bloods gave no reaction at the end of twenty-four hours. The blood of the same patient failed to agglutinate *Bacillus coli communis*, nor did her blood agglutinate a very small coccus isolated from the blood of a case of acute mania. We have tested the agglutinative power of the blood of all our acute and three demented cases to this streptococcus in dilutions of 1 in 20 and 1 in 30. Eight gave definite complete clumping, three gave partial reaction, four gave no reaction. No control ever gave a reaction. The agglutinative reaction was slow, but was generally complete in six hours. No control ever reacted in twenty-four hours. We have tested the agglutinative power of the blood of fifty other patients, not cases of katatonia, to this streptococcus, and only five gave the agglutinative reaction. It is probable, therefore, that the agglutinin frequently present in the blood of patients suffering from katatonia is a specific agglutinin.

In no case under observation did the acute stage last longer than four weeks. This of course only includes the period of acute symptoms, not the prodromal period. The second or stuporose stage of this disease came on immediately after the febrile attack where such a symptom was present, or in default of the febrile attack a high leucocytosis heralded the onset of this stage. The physical symptoms of this stage are so well known that I need not do more than mention them. The alimentary tract was still disordered. The heart's action was weak and slow, the extremities were blue and cold, and the feet and hands became œdematous. The arterial tension fell. The lungs were liable to tubercular infection. The temperature was uniformly subnormal. The skin sometimes desquamated in small branny scales, sometimes was very greasy, and a condition of "varnished" skin was noted. Amenorrhœa was a constant symptom in women. It was impossible to test the sensory functions, but the special senses were quite active, as these patients knew what was passing around them. There was a tendency to retention of urine and fæces, the patient resisting these organic reflexes. The skin reflexes continued increased, but the tendon reflexes often could not be elicited on account of muscular resistance. The voluntary muscles were thrown into resistance by any attempt at passive movements. The mental state was one of stupor, often complicated by delusions. Impulsive actions, curious

attitudes, mutism, rhythmical movements, sudden outbursts of apparently maniacal excitement as sudden in termination as onset, all the innumerable physical and mental oddities to be seen in this disease, were well illustrated by the cases under observation. Sleep returned and was, as a rule, excessive. The condition of the leucocytes during this second stage was interesting. Immediately upon the onset of the stupor the leucocytes might fall to below 8000 per c.mm. of blood, but soon they rose again, running on an average between 12,000 and 16,000 per c.mm. The percentage of polymorphonuclear cells fell to about 60, the lymphocytes

CHART 2.



increased, and a transient eosinophilia occurred in every case. Three out of the twelve cases have recovered, and in them it was noted that the polymorphonuclear cells never fell below 60 *per cent.* As recovery progressed the leucocytosis did not necessarily rise, but the percentage of polymorphonuclear cells increased. When recovery was complete the percentage of polymorphonuclear cells fell again to about 60. The leucocytosis never fell, however, lower than 12,000 per c.mm. Three cases which have become demented, and a fourth which has every appearance of becoming so, presented the following peculiarities:—Early in the stuporose state their leucocytosis fell frequently to 8000 and 10,000 per c.mm., and the per-

centage of polymorphonuclear cells was below 50. In one of the cases the polymorphonuclear percentage fell sometimes below 30. Some indication as to prognosis can therefore be obtained by examining the blood of these cases.

Experimental Observations on Rabbits.

The object of the experiment was to ascertain if the streptococcus isolated from the blood of the case of acute katatonia produced any form of disease in rabbits. Rabbit No. 1 was injected intra-venously with 1 c.c. doses of broth culture of the organism. Rabbit No. 2 was injected intra-venously with 1 c.c. doses of a filtered broth culture of the organism.

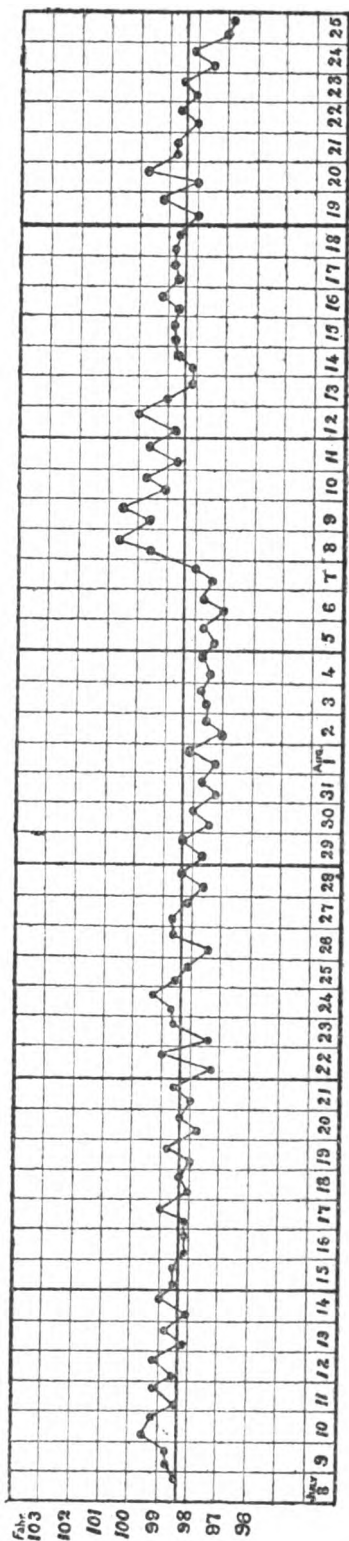
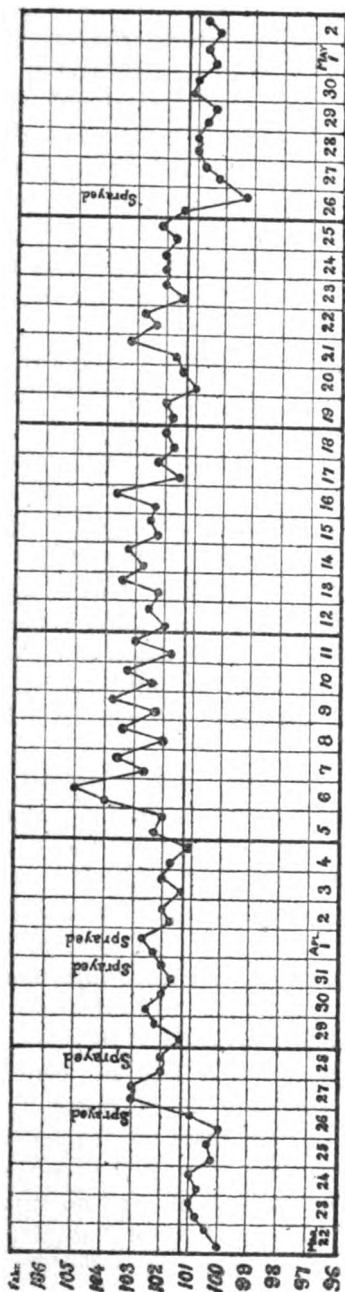
Rabbit No. 1 during a month received in all 7 c.c. After each injection the temperature rose one or two degrees, and latterly the temperature was irregularly febrile independently of injections. At the end of the month the animal became listless, dull, and lethargic, and the cutaneous reflexes were exaggerated. The animal always took food. In the middle of the sixth week we injected intra-venously 2 c.c. of an intra-cellular extract of the streptococcus. The temperature immediately fell to subnormal, and continued subnormal for two days. The rabbit at the same time wakened up out of its lethargy. Since then the animal appears to have become immune to the organism.

Rabbit No. 2 showed no reaction to the intra-venous injections of the filtered culture, which points to the fact that in broth cultures the toxin of this streptococcus is purely intra-cellular.

Rabbit No. 3 was inoculated subcutaneously with living broth cultures of the streptococcus. Rabbit No. 4 was inoculated subcutaneously with an intra-cellular extract of the organism. Both animals gave a slight febrile reaction to the injections, but no other symptoms were noted.

Rabbits Nos. 5 and 6 were sprayed with living broth cultures of the streptococcus, and by licking themselves were therefore infected by the alimentary tract. Both animals gave definite results. One or two days after infection their temperatures rose and continued irregularly febrile, independently of subsequent infections. In Rabbit No. 5 a definite febrile attack was noted ten days after the first infection with the

CHART 3.



organism. This febrile attack lasted irregularly for three weeks, when the temperature fell to normal, *i. e.*, 101·4 in a rabbit. Both animals took food, but they looked unhealthy, and nutrition was imperfectly performed. They both suffered from transient attacks of lethargy, and in both the superficial reflexes were increased. Both animals became immune to the organism about six weeks from the date of the first infection, and any further infection not only failed to raise the temperature, but actually lowered it to subnormal for one or two days.

Rabbits Nos. 7 and 8, sprayed with broth cultures of the streptococcus killed by heat (60° C. for 30 minutes), presented no symptoms. Every rabbit, with the exception of Nos. 2, 7, and 8—No. 2 was intra-venously injected with filtered broth cultures, and Nos. 7 and 8 were sprayed with dead cultures,—developed a specific agglutinin to this streptococcus, complete agglutination taking place within the hour with dilutions of 1 in 50 and 1 in 100. We found, however, in testing the normal agglutinative power of rabbits' blood, that certain rabbits possess serum capable of agglutinating this streptococcus in dilutions of 1 in 20 and 1 in 30. The agglutination is often incomplete. We have never been able to pass the organism through an animal and obtain it again from the blood.

The treatment of katatonia is eminently unsatisfactory. All but one of our cases, treated by rest in bed, fluid diet, saline purgatives, ran through the various stages of the disease unchecked. Our first effort at experimental treatment was to immunise a goat to the streptococcus obtained from the acute case of katatonia. We used the serum of this goat to treat two cases in a condition of stupor in subcutaneous injections of 12 c.c. daily. Treatment in both cases had to be discontinued on account of erythema and general urticaria. In one acute case it produced the same complication and no beneficial effect. We next exhibited the serum in 10 c.c. doses by the mouth in two stuporose cases. In both cases the temperatures fell very low, and continued very low during the period of administration of the serum. The patients showed no signs of improvement. The serum was again tried by oral administration in huge doses, 80 to 140 c.c. in a day in the twelfth case of our series during the acute onset of the disease. Here it again lowered the temperature, but its curative effect was

practically *nil*. We then treated five stuporose cases with subcutaneous injections of broth cultures of the organism killed by heat (60° C. for 30 minutes). Three of these cases were patients whose serum had failed to agglutinate this streptococcus. Our object in this experiment was to rapidly raise the active immunity of the patients.

Case No. 1 received injections of 33 c.c. in fourteen days. The highest temperature recorded was 99.8° F., and at the end of three weeks the patient had gained 6 lbs. in weight. There was no mental improvement.

Case No. 2 received 146 c.c. in forty-two days. The highest temperature recorded was 101.8° F. We believe this temperature to have been due to some accidental cause, as this case was quite immune to large doses of the dead culture. The patient gained 3 lbs. in weight during treatment, but there was no mental improvement.

Case No. 3 received 82 c.c. during a period of twenty-four days. The temperature was never febrile. There was no gain in weight and no mental improvement.

Case No. 4 received 66 c.c. during a period of thirty-two days. This patient gained 8 lbs. in weight. The temperature rose once to 99.2° F. There appeared to be slight temporary improvement mentally.

Case No. 5 received 56 c.c. during a period of thirty-three days. There was no febrile temperature. The body-weight increased by 3 lbs., but there was no mental improvement.

Eleven days after the last injection in each case the agglutinative power of the serum was tested. In every case the serum possessed a high power of agglutination. After the failure of the goat's serum to arrest the acute onset of the disease in the twelfth case of our series, we commenced to actively immunise the patient by means of subcutaneous injections of broth cultures killed by heat. This case was a very acute one; each mental exacerbation was heralded by an attack of vomiting and a feeling of sinking in the epigastrium. Within twenty-four hours of these prodromal symptoms the patient passed into an attack characterised by vivid hallucinations, wild terror, impulsive actions (especially trying to jump through windows), noise, and sleeplessness. We anticipated each attack by injecting first 4 c.c. and later gradually increasing doses. On each occasion the attack was aborted. In a week

the pulse-rate had fallen, and each injection lowered the temperature, which was inclined to rise prior to an attack. In this case the treatment undoubtedly arrested the disease, but how the injections acted we cannot explain. It is not possible that an immune body was formed in the short period which elapsed between the injection of the dead culture and the improvement in the patient's condition, a matter of two or three hours at the very outside. Towards the later part of treatment this patient also received by the mouth 2-minim doses of *Acidi Carbolici*, highly diluted, thrice daily, but improvement was most marked before this treatment was added to the injections of dead cultures.

Our conclusions from these observations are that katatonia is an acute toxic disease with a definite onset and course, in which the symptoms vary according to the resistive power of the patient, but in which the following diagnostic symptoms are never absent :—A prodromal period of gradual onset, which leads into the period of acute onset, with aural hallucinations, mental confusion, paroxysms of excitement, impulsive actions, katatonic spasm of the muscles, a hyperleucocytosis which at the termination of the acute stage indicates a virulent toxæmia. In the second stage a condition of stupor with muscular resistiveness to passive movement.

2. That even at the onset of the disease there is in about 70 *per cent.* of the cases an agglutinin in the blood-serum which appears to be a specific agglutinin to a short streptococcus which was isolated from the blood of an acute case of katatonia.

3. That by infecting rabbits through the alimentary tract or blood-stream with this streptococcus a condition of malaise with irregular temperature, increased skin reflexes, and mental hebetude is induced. This disease tends to terminate naturally in healthy rabbits in about six weeks, and a condition of immunity is established to this organism.

4. That treatment by an antiserum obtained from a goat has given no beneficial results.

5. That active immunisation of patients in the stuporose state produced no curative effect.

6. That active immunisation in the acute onset of the disease, tried so far in one case only, produced undoubted benefit, but how this beneficial effect is brought about cannot be explained

by any theory at present held with regard to the production of immunity.

DISCUSSION

At the Annual Meeting in London, July 17th, 1903.

The PRESIDENT.—We are much indebted to Dr. Bruce for this most excellent paper, and for the experimental work which he has done in regard to this interesting disease. I shall be glad if those present will give an account of similar cases which have occurred in their practice.

Dr. ROBERT JONES.—I am very unwilling to begin the discussion, because I know there are several members present who have not only had cases of the same kind under their care, but have written extensively on the subject. I congratulate Dr. Bruce upon the experimental work which he has been doing. I am incapable of discussing the paper from this standpoint, because I have not worked in that direction; but if his paper leads to anything which will modify what I consider to be the greatest scourge among our educated youths, it will do a great amount of good. I am astonished to see the number of stuporose cases which have come under my care recently, comparatively speaking; that is, within the last half of my experience—say ten or more years. My experience goes back nearly a quarter of a century, and it was quite uncommon to have cases of katatonia and dementia præcox many years ago, but now they have become comparatively common. At Claybury Hall, where we have only fifty private cases, we have as many instances of this stuporose form as in the main asylum with its 2400 cases! I was very much struck by our President's remarks—with whom, indeed, I have lately had an opportunity of discussing this form of insanity—respecting the prevalence of these cases, and I shall make use of my own experience in an address on a coming occasion. Dr. Bruce says the rise of temperature is more or less typical of a patient who is under treatment for some time. I should like to know how much of that is due to the patient's condition under treatment,—that is to say, how much is due to the difficulties that nurses and medical officers have in feeding these cases? I referred yesterday to a case of œsophagotomy at the London Hospital. Precisely the same chart is seen in this case. If food goes into the bronchial tubes or gets into the lungs, after a certain time it gives rise to the same temperature reaction, more especially if the food taken has been milk, and I have at the present time a case of this kind which takes nearly ten pints of milk in the twenty-four hours! I should like to know what Dr. Bruce's experience with regard to the difficulty of feeding these katatonic cases may be, and whether he connects the late rise of temperature with a sort of subcatarrhal pneumonia—a form of broncho-pneumonia which may eventually end in death, but which presents no symptoms in the way of cough or expectoration; and, indeed, very few symptoms on careful auscultation. The early temperature one can to a certain extent understand, for there is a very marked "apprehensiveness" in these cases. A case comes to my mind which used to be dressed surgically at St. Bartholomew's Hospital in my student days, and which was reported in the *Hospital Reports*. When the dresser went to dress a fractured tibia in the case of a child, the temperature sometimes rose to 100°, and after the dressing was over it went down again to normal. There is no doubt that fear or apprehensiveness may cause such constitutional disturbance as may involve a rise of temperature. I do not wish to take up the time of the Society any further, but we have had an extremely interesting paper from an accurate observer, and I congratulate Dr. Bruce on producing what I consider to be a distinct addition to our knowledge.

Dr. ANDRIEZEN.—I have for some time paid attention to this particular subject of dementia præcox, and recently I have published in the *Hospital* an article on the subject, dealing especially with the varieties of this disease. I am extremely pleased to have the opportunity of hearing Dr. Bruce's paper, because it is an example of the newer and better type of clinical work which is so necessary for the advancement of our knowledge of many of these obscure mental disorders. A large amount of evidence has been collected to show—and that is borne out by cases one has seen and studied—that toxæmic conditions occur in many varieties

of dementia præcox. But I think we should not ignore the fact that has been insisted on by the French school of alienists, that the whole group of insanities which come under the heading of dementia præcox shows, almost from childhood, symptoms indicating some degree of what the French call degeneration of the brain. Sometimes it is allied to imbecility. Many subjects of dementia præcox who after adolescence become katatonic or demented, show in childhood extraordinary characteristics, and tendencies to obsessions and impulses of various kinds. Such conditions last practically throughout life—at least until dementia supervenes,—showing that throughout the whole period of growth, in later childhood at any rate, the brain is, as it were, evolving in a very abnormal, anomalous fashion. And this must be borne in mind as the chief factor, because it is in such subjects that toxæmic conditions will give rise to such extraordinary reactions as profound stupor, resistiveness, and silly vagaries of conduct which the mentally healthy individual afflicted with toxæmic conditions would not exhibit apart from mental confusion. It struck me very strongly in the course of Dr. Bruce's paper that his observations went far to show that we must drop to some extent the old psychological metaphysical views which we have held about mental diseases for so long. It is not so very long ago that, in Dr. Tuke's *Dictionary of Psychological Medicine*, the author of the article on katatonia, looking at it from the old standpoint only, said there was practically no such illness—that katatonia was really a melancholia which passed through a period of mania and went through stupor, and finally ended in a state of dementia. It would be extraordinary if a disease worthy of the name were a compound of four diseases. We know that that is not so, but that it is one disease which passes through four or five stages, which in their entirety constitute the disease. Katatonia and varieties of dementia præcox appear to us, from the most refined type of clinical research, to be undoubtedly diseases in the strict sense of the term, for they run their course through various stages, but these stages are not diseases by themselves,—in other words, that katatonia is not mania, or melancholia, or stupor, nor is it dementia; but that it is a disease which has characteristic stages through which it passes, and which have a natural sequence, although some of these stages may be slightly abbreviated or aborted. But the whole series of stages, taken together, comprise the disease. I am glad to hear Dr. Jones say he meets with more cases of katatonia than formerly. I meet with more cases of it than I used to. It is interesting to hear Dr. Bruce's observation that the toxæmia need not necessarily be febrile. It used to be widely believed in asylums that it was. In the very early stage of general paralysis, the temperature having been regularly taken, we looked for a rise of temperature but seldom found it, and then we doubted whether there was toxæmia at all. But at that time, which was ten or eleven years ago, we made no observations on the leucocytes, and we were not certain whether there was toxæmia or not. But the observations made during the last eight or nine years tend to show that a certain amount of leucocytosis above the normal occurs in the early stage of general paralysis, and where there is a slight febrile reaction leucocytosis is very much more marked, showing that we have here a new means for determining whether some serious degree of toxæmia is present or not. As regards katatonia my studies have been chiefly in the clinical direction, but the conclusions I have come to in this respect seem to show that it must be deemed worthy of inclusion in our system of classification; it has not yet been included in our psychological tables or statistics. Many of the cases of katatonia have been called "stupor," and other cases have been included as katatonia which were merely secondary stupor. If more papers of this character were read which contained clinical evidence of the sort which is necessary, it would do much to clear our ideas and make us drop a good deal of our old psychology, helping us to a better classification of the types of mental disease.

DR. HAYES NEWINGTON.—I used to pay attention to this condition of stupor, and katatonia is certainly a new product since the time when I did pay attention to the matter. I have read one or two papers on katatonia, and I have noted what has been said about it here, and especially what fell from Dr. Andriezen. Katatonia is talked of as a disease. But if it is to be regarded as a separate disease we want a definition of it, and when we have got that we want it accepted generally. But in many of these questions of nomenclature—especially that dreadful word "confusion," which is becoming so prominent—one comes to see that

so many people have so many different opinions. We find that one man is talking of a group of symptoms under a name which perhaps does not quite cover the particular group of symptoms which another man might associate with the same term.

Dr. MORT.—I should like to congratulate Dr. Bruce on this attempt to throw some light on an obscure disease. It is an effort in the right direction, it seems to me, to find out what the exciting cause in these cases is. And the toxic idea is the one which I think should be studied carefully. I would like to ask Dr. Bruce one or two questions. First of all, does he claim that there is a specific streptococcus in this disease? His experiments on rabbits rather led me to suppose that he did claim a specific organism which would produce in the rabbit, when the toxin was injected, a condition somewhat similar to that observed in the patients. Now, to prove that, it would be necessary, it seems to me, to take streptococci from other sources, or else perhaps you have only sick rabbit. I do not wish for a moment to throw any cold water on the very laudable attempt which Dr. Bruce has made, because I really think that this is a move in the right direction, and I think Dr. Bruce will fully admit any criticism that I offer is in the most friendly spirit. It is no good sitting down and looking at these patients any longer; the proper thing is to find out what is the cause of the toxic condition of the blood. To make his experiment more complete with regard to rabbits it would be better—and I speak from some experience in experimental medicine—if he would try some other animal. Rabbits are very fallacious animals; many mistakes have been made by using them. If he could use the streptococcus or the toxins from the blood of these cases on the dog, he would find that animal much more intelligent and satisfactory, because streptococci are very potent organisms, and produce profound effects. Another question I would ask Dr. Bruce is, are these streptococci generalised in the blood in such cases, or where do they exist? Where has he obtained his cultures from? I understand he has only got it in one case (Dr. Bruce: Yes). Of course it would be much more demonstratively proved if he got it in every case. And I think that the temperature chart which he shows is rather suggestive of a possible complication. If this disease were due to streptococcus one would have expected the temperature to be high early in the disease, when the leucocytosis is still active. I offer it as a suggestion, that this would have to be answered before we could accept the view that this was the cause of the condition. Dr. Jones pointed out that it is very easy to get a little broncho-pneumonia in these cases, and one which you cannot discover by physical signs. I have seen that so often in making *post-mortem* examinations, and no doubt Dr. Bruce has also seen it; and it would give rise to that temperature and to leucocytosis. But I do say that Dr. Bruce is to be heartily congratulated on a move in the right direction, and I wish him every success in this attempt, by clinical observation and experimental research, which is the only way, to solve some of these difficulties which we have to deal with.

Dr. BRUCE.—I am much obliged to the various gentlemen who have spoken for their criticisms. Taking the first temperature chart, I quite admit that the temperature, on the face of it, looks exactly like that of a case where there has been a little accident in feeding. But that is not the only temperature chart I have. The majority of my cases I never touched, beyond observing them carefully at the bedside and working in the laboratory at the blood. I interfered in no way with the course of the disease. The cases were in charge of special nurses, and there was a temperature similar to this in other cases, without symptoms in the lung; and they were overhauled by both of us and by a clinical clerk, and we could detect nothing in the lung which would account for this. The blood was sent up to Burroughs and Wellcome's laboratory to be tested for typhoid fever, because the condition of the patient suggested that illness. Again, there are other cases where you get a rise of temperature to only 99° or 100° for one night, but a huge leucocytosis; and then two or three days afterwards the patient passes into a state of stupor. I am willing to admit that these temperature charts, of which I have at least ten good ones, might be construed as being due to pneumonia, and I have so frequently seen broncho-pneumonia in acute mania producing such charts that I was very suspicious. But it was not till I got a series of cases that I began to think, here is the termination of an acute attack; the temperature falls, the leucocytosis goes down, and the patient goes straight off into stupor. These cases were fatal, with one exception. I had to feed one case with the nasal

tube, but all the others were carefully fed with milk. They got three to four pints of milk during the day, and a pint at night, in addition to other fluid diet. The idea of filling these patients up with custards and hard food which requires much digestion is irrational and bad treatment, besides being cruel. I agree with Dr. Andriezen that in all these cases hereditary predisposition is the chief cause. There must be some very serious change in the resistive power of the patient from youth upwards. But I do not agree with Dr. Andriezen when he calls these cases *dementia præcox*. I do not know that there is such a thing. Why should we classify a disease in accordance with its termination? If we carried that out we should say all disease is death, because it ends so. And if you classify a case according to whether it ends in dementia or not, to be consistent you would have to classify all diseases under one heading. There is a great difference between katatonia and hebephrenia; you do not get the same agglutinin in the blood in hebephrenia that you do in katatonia. Dr. Hayes Newington says when you get a collection of symptoms you cannot always call it a new disease; and apparently he is not very much in favour of the new name katatonia. You have a distinct collection of symptoms, which are apparently a distinct disease. What shall you classify it as? Are you going to classify it as melancholia, or as mania? You get a collection of symptoms which are neither the one disease nor the other. What will you do? Shall we stick where we have been for the last twenty years because we are afraid of putting a new name to our collection of symptoms? Katatonia is not melancholia; compare them one with the other. Take the blood of a case of mania, and you will not get the blood agglutinated by streptococcus. There must be some specific condition; there must be some difference between katatonia and mania, and between that and melancholia; and we must have some name, otherwise we cannot classify such cases.


Dr. HAYES NEWINGTON.—The reason I raised the question at all was that we heard *dementia præcox* mentioned, which was also a new name, and they both seemed to be recognisable diseases in certain quarters.

Dr. BRUCE.—I think every case except general paralysis would come under the term *dementia præcox* according to some works in America; and under some of the names they have brought out, such as "depressive insanity," even general paralysis could be included. Dr. Mott's criticism I value very highly, and I agree with him about the rabbits. A rabbit, I find, is a most unsatisfactory animal to work with; its temperature seems to go up very readily, and it is easily frightened. I do not know that I could go the length of saying that this streptococcus is the specific one which causes the disease, but apparently it must have something to do with the disease; it is either a primary or a secondary infection, because you get this agglutinin so constantly in the blood of these cases, and I am not certain whether the streptococcus is present in every case. In the only case in which I got it, it was in the blood; and in the few instances in which I have got organisms in the blood of the insane the patients have been in a desperate state—in a state of typhoid collapse,—and you may say the organisms were the terminal infection. They existed in the blood, and on examining the films which we took on the same day I got two typical examples of this organism, showing it must have been fairly numerous in the blood on that day. The girl was treated with frequent saline infusions, and she made a very good recovery indeed. I have examined the alimentary tract in all cases where there was vomiting, and we have made cultures and tried to isolate the organism from it, but have failed. We have not obtained that organism again from any source whatever in these cases of katatonia. I got it from a girl, but I never examined the vagina, as there was no likelihood of infection. If this sort of work will stimulate anyone to make similar observations, then I shall be very pleased, because I am absolutely certain that any future advance which we are to make in psychology, so as to bring our speciality abreast of other specialities and equal to the advances in general medicine, must be made by work at the bedside in association with work in the laboratory.

Female Nursing of Male Patients in Asylums. By
A. R. TURNBULL, M.B.Edin., Medical Superintendent,
Fife District Asylum.

THE question of utilising female nursing to a greater extent than formerly in the care of male patients in asylums has roused much interest of late years, and has been brought under the consideration of the Association on several occasions. In advocating the adoption of this form of nursing one is apt to give the impression that the method is something entirely new as applied to asylum patients. But that is not intended, for in reality the system has existed to some degree for a long time; and it is only the question of the advantages of extending it, and making it much more systematic and complete, that is now raised. In some places on the Continent it has been in use for a number of years, and is developed to a greater extent than is usual in this country. In April last I had an opportunity, in company with Sir John Sibbald, formerly Commissioner in Lunacy for Scotland, Dr. Fraser, Commissioner in Lunacy for Scotland, and Dr. Robertson, medical superintendent of the Stirling District Asylum, of visiting two institutions in Holland and seeing the method in practice; and I now venture to submit some notes, not by any means exhaustive, of what was observed there, and to make these, and my own further experience of the system at the Fife Asylum since 1896, when I had the privilege of reading a paper descriptive of it at the annual meeting of the Association, the basis of my remarks at this time.

The institution first visited was Meerenberg, near Haarlem. This asylum gives accommodation for over 1300 patients, of whom more than 600 are males. Some of these are private cases, paying high or moderate rates of board, but the great majority correspond to the class of our rate-supported or pauper patients. The medical superintendent, Dr. van Deventer, was formerly in charge of the largest of the general hospitals in Amsterdam. He was appointed to Meerenberg in 1892, and since that time has re-organised the staff there most carefully and with great enthusiasm, and in doing so has made it his aim to bring the nursing and care of the patients into line as much as possible with what is looked for in a well-managed



hospital for general diseases. In a tabular statement attached to an interesting paper by Dr. van Deventer it is shown that at Meerenberg the staff on the male side consists of fifty-seven females and forty-six males. In each section of the asylum there is a head female nurse, who takes her orders from the medical officer in charge and is responsible for seeing his directions carried out by the staff under her. The ward for idiots is entirely under female charge. Two wards for restless cases (containing 108 patients out of a total male population of 609) are staffed with male attendants only, though still under the supervision of the head nurses of their respective sections of the asylum. In all the other wards there is a mixed staff of males and females, the latter being the more numerous in almost every instance, and always having the main charge and responsibility. The head male attendant has his principal duty in supervising the patients when they are in the workshops or outside in the grounds. In going through the wards at Meerenberg one finds abundant evidence that this system of female care is carried out in practice in a very thorough way, and that the nurses have by far the most important part in the oversight and charge of the male patients. In the indoor work of many of the wards the male attendants are relegated very much to ordinary domestic duties, and have little to do with the direct management of the patients. Dr. van Deventer indicates that the male attendants do not find the same satisfaction in their ward duties as the female nurses do; and doubtless this is due, in part at least, to the subordinate position they have to take in the wards, without prospect of promotion. Consequently it is difficult to secure and keep a good class of attendants, and Dr. van Deventer considers that to obviate this difficulty it is desirable to employ only those who understand a trade, by which they may be enabled to rise afterwards to better posts. Another point which impressed itself strongly on me is that in the management of a few very excited and troublesome cases there is a tendency to resort to the use of seclusion somewhat more readily than would be considered advisable by many of us,—this being, indeed, inevitable, as it is recognised that on the ground of physical strength alone the nurses could not be expected to control these patients for any prolonged period. But in making reference to that point I do not in the least imply that seclusion is used more freely at

Meerenberg than elsewhere in Holland, for I have not the material for making a comparison in regard to it, and it is quite possible that at Meerenberg the amount of seclusion is not greater, and may even be less, than what it is in other Dutch asylums. Under Dr. van Deventer's superintendence there has been built at Meerenberg a sisters' home, giving accommodation for over 130 nurses, while in addition about sixty nurses have rooms in the asylum buildings proper. The home, in addition to the bedrooms, has a very large hall, in which the nurses dine in association; a smaller sitting or recreation room; and—a feature which impressed us most favourably—a study room, which is well supplied with diagrams, models, instruments, and books bearing on the subject of the training of attendants on the insane. It may be of interest to mention the system of training of nurses which is adopted by Dr. van Deventer, as it differs much from what is usual in our country. During the first year the probationers remain in the nurses' home and learn domestic work there. During the second year they go to the laundry section, learn the work of the dry laundry (without being expected to work in the wet laundry), are employed in making and repairing the clothing of the patients, and have the supervision of the patients working in that part of the asylum. It is only after this preparatory instruction that they take duty in the wards proper, and after a year's work there (making a total of three years' training) become eligible for examination for the certificate of efficiency. There can, I think, be no doubt that the system of female care of male patients at Meerenberg, as administered by Dr. van Deventer, with the valuable assistance and special knowledge of Mrs. van Deventer (who is a trained nurse, and, though holding no official position in the asylum, takes a keen interest in the work, and gives it her most hearty support), secures intelligent, efficient, and tactful management of the patients, and that the relations between the nurses and the patients are of a very satisfactory kind.

The other institution visited was the Wilhelmina Hospital in Amsterdam. It takes the place of the old Buitengasthuis or Infirmary, which is now abandoned. Dr. van Deventer was formerly superintendent of the Buitengasthuis, and the newly erected Wilhelmina Hospital was being opened under his direction when he was called to Meerenberg. It is now under

the superintendence of Dr. Kuiper. It consists of a block for medical cases, another for surgical cases, and another for mental cases (male and female). But while the building for mental cases is thus part of a general hospital, it is also an asylum in the usual acceptation of the term, for the patients here are under certificate and legally subject to compulsory detention. The procedure, in fact, is that the patient is certified as being of unsound mind, and authority got for placing him in one of the regular asylums of Holland. Then under a special arrangement the Burgomaster of Amsterdam issues a further order by which power is given to send the patient to the Wilhelmina Hospital instead of to the asylum; and from the hospital he can afterwards be either discharged to his own home or transferred to the asylum, as may be found desirable. The building was planned for sixty patients on each side, but the pressure of requirements has made it necessary to receive a much larger number. On the male side, which is the more crowded, there are over a hundred beds. It is intended that the limit of residence should as a rule be six weeks, but a few cases are kept for much longer periods. As, however, the admission rate on the male side is about thirty per month in a total population of a little over a hundred, it is evident that the movement of the patients must be very rapid, and that many of the cases must be instances of the short-lived forms of insanity, such as that following on acute alcoholism. Except that the doors are locked, the arrangements of the building are very similar to those of the wards of an ordinary hospital. The patients are mainly in dormitories; many of them are treated in bed, and the medical care and the attendance by the nurses are carried on in the same way as in a ward for ordinary medical or surgical ailments. There are a few separate small rooms for the treatment of very troublesome or noisy cases. Under the medical staff a matron and a head nurse are in charge of the building; and we were much interested to find that the present matron Miss Kruisse, served for four years on the nursing staff of the Edinburgh Royal Infirmary, and still keeps up a very friendly intimacy with the lady superintendent of nurses there. On the male side more than half of the staff under the matron and the head nurse consists of female nurses. It is, however, considered that the most restless cases are more suitably managed by men, and the rooms for them are staffed with male attendants under

the supervision of the matron and the head nurse. For night supervision there are three dormitories, in which respectively are placed (1) restless cases, (2) less restless cases, and (3) calm or convalescent cases. The first and second of these are under male attendants; the third only is under female charge, and for it male assistance can be got readily if required. For the hospital's diploma in general nursing it is necessary to have three years' training. Time spent in the mental wards is allowed to count in making up the three years; but if the certificate for mental nursing is also desired it is necessary to serve again in the mental wards for several months after getting the general diploma.

Our party felt themselves greatly indebted to Dr. and Mrs. van Deventer, Dr. Kuiper, Miss Kruisse, and the members of their staffs for the very kind reception given to us, and for the courtesy and readiness with which they supplied us with all the information we desired.

I turn now to my own experience in the Fife Asylum. In the paper read before the Association in 1896 I described the plan which had been introduced there some time previously of having the male sick-room under the charge of the female staff. The object aimed at was that all cases on the male side which had to be in bed on account of bodily illness should, whenever possible, be in the sick-room, and should be nursed and managed in exactly the same way as if they were in the ward of an ordinary general hospital. I was able then to speak most favourably of the result of the experiment as having had a very beneficial effect both on the patients and on the staff. The system has been continued up to the present time, and the added experience of seven years has confirmed and emphasised all that was said in its favour in 1896. The difficulties which one looks for in dealing in this way with male insane patients have vanished when put to the test of practice; the care of the patients has been greatly improved; the patients as a rule appreciate what is done for them, and submit readily to be guided by the nurses; and the nurses take readily to the work and find pleasure in it—and, indeed, they often say that the male sick-room is more easily managed than any of the wards on the female side. It accentuates the feeling that there is real nursing to be done in asylum duty. Under our present arrangement newly admitted cases, if requiring treatment in

bed on account of their mental state, are also sent to the sick-room. I must guard against giving the impression that every patient for whom bed-treatment is desirable goes without exception to the sick-room. In my experience this is not the case, but the number of those who have to be kept away on account of the sick-room being under female charge is found in practice to be remarkably small. It is, in fact, limited almost entirely to those patients who on account of acute restlessness, noise, or similar disturbing condition are not suitable for association with other patients, sick or otherwise. In the Fife Asylum these are treated in separate rooms in a small ward in the main building, quite away from the sick-room, and are under the charge of male attendants. It is, I think, an error to expect that all the cases sent to an asylum will be suitably managed under one system alone, and it is better that our arrangements should possess some elasticity and allow of the details of management being varied as circumstances may require. For example, a tall powerful man in the acutely maniacal stage of early general paralysis was admitted to the asylum some months ago. He was exceedingly restless, incessantly leaving his bed and trying to get out of the room, very resistive, often struggling in an obstinate way with those near him, and quite unable to take any proper care of himself. He was evidently unfit for care in the sick-room, both because he would overtax the strength of the nurses and because he would disturb the other patients there. This condition lasted for many weeks, and during that period he was kept in bed in a room in the small ward already referred to, and was under the charge of male attendants, who were able to manage him without resort to seclusion and without any cessation of direct supervision. In time the acute excitement passed off; and now, when the increasing paralysis and consequent bodily weakness from the advancing brain disease are the more prominent and urgent conditions in his case, he has been transferred to the sick-room and is easily managed by the nurses. But, as already indicated, such cases constitute only a very small proportion of exceptions, and the great majority of patients requiring bed-treatment can go to the sick-room. The system has proved so successful, and is so evidently beneficial, that it is regarded as an *essential* part of the organisation of the asylum; and when some additions which are at present being made to the hospital building are com-

pleted I hope to extend it still further, and to place several more rooms under the direct charge of the nurses.

If now we consider the question, To what extent can female care be advantageously utilised in the management of male cases? I would in the first place say that there are two classes of patients for whom it has been proved to be serviceable. At one end, as it were, of the line of male patients are those who, on account of bodily ailment, require special sick nursing, which can without doubt be best given by trained female nurses. A number of asylums have adopted the plan to that extent, with results which show that it has passed the stage of being tested and can now be regarded as having proved its value. At the other end of the line are patients whose insanity is of a chronic form, who are in good bodily health, and who are quiet in conduct and present no special difficulty of management. In some asylums it has long been customary to have this class partly under female charge; and of course we all know that in the case of chronic patients discharged from asylums as still unrecovered, and placed under private guardianship, the supervision is very largely in the hands of females. For example, in the Fife Asylum there has been for more than thirty years a detached villa for thirty-two patients of this class, under the charge of an attendant and his wife. The plan has worked for all these years without any difficulty, and the presence of the attendant's wife is beneficial in securing greater tidiness and orderliness in the housework, and in the serving of meals, etc., and in promoting a better tone of conduct among the patients. From the position already occupied at each end of the line, it is, I think, possible and advantageous to extend the system to a considerable degree among the patients who lie between the two groups which have been referred to. There is now a growing recognition of the fact that some forms of insanity of recent occurrence derive benefit from rest in bed, even when there is no special bodily ailment present; and that brings them into the group for sick-room care. Similarly many senile patients, bordering as they do on the class with active bodily ailments, are easily and beneficially kept under female charge. And again, those cases which progress steadily to recovery may with advantage remain in the hospital under the nurses, and be saved from the possibly unfavourable experience of being

placed among confirmed cases in the chronic wards. With suitable arrangements of the buildings there need be little difficulty in increasing the number of quiet chronic patients who are partially under female supervision. What has been done at Meerenberg shows that it is possible to extend the system through nearly all the wards on the male side. But while I greatly admire Dr. van Deventer's work, I am not persuaded that it is advisable, as well as possible, for us to develop the system on exactly the same lines as have been followed at Meerenberg. I have found that the nurses, in taking charge of male patients, prefer for obvious reasons to do so by themselves, and do not care to undertake it in association with male attendants. Except, therefore, in those instances in which a married couple are in charge of a ward or separate house, with or without a staff of junior attendants to assist them—and, as already indicated, I believe that this method can be extended with advantage,—my feeling is against having a mixed staff in any ward. The ward staff should, I think, be either entirely male or entirely female. I have already mentioned that a proportion of the recent and acute cases require, according to my experience, to be under male charge. Then we know that, in addition to its curative function, an asylum has also a very large duty in taking care of the chronic insane, most of whom will spend practically all their days in the institution. For them it is requisite to provide a routine of life which will include regular outdoor employment and exercise during the largest part of every day, with suitable supervision of their conduct and habits at all times. For that purpose attendants are evidently necessary ; and if we debar mixed staffs except in the circumstances already referred to, it means that a considerable number of the wards for chronic cases must still remain under male charge so far as actual attendance is concerned. I would apply the same principle in regard to night supervision. If the number of cases requiring active nursing at night is sufficiently large to fill a ward, I would place it under the charge of the nurses. But much of the night-work in an asylum is of a kind that is more suitably done by male attendants, and I would put the larger part of it under them, or even the whole of it rather than have a mixed staff in any ward. In conclusion, I would say that in asylum work among male patients there is scope for the aid both of attendants and

of nurses, and our aim should be to secure the best features of both classes of assistance. In doing so it is, I believe, possible and advantageous to extend further the use of female nursing on the male side, while still retaining much important work for the attendants.

[NOTE.—As Dr. Robertson was expected to take part in the discussion, I intentionally did not make any reference to the great development of the system of female nursing which he has instituted at the Stirling District Asylum, hoping that he himself would describe it. Unfortunately Dr. Robertson was prevented from attending the meeting.—A. R. T.]

DISCUSSION

At the Annual Meeting in London, July 16th, 1903.

The PRESIDENT.—I am sure we are much indebted to Dr. Turnbull for his paper, which we value very highly, upon the nursing of the male insane by female nurses. It is a subject which has engaged the attention of most of us superintendents throughout the kingdom. I began in a very small way in my male hospital with a married charge attendant, the wife being a trained hospital and trained asylum nurse. I now have both charge attendant and wife with the certificate of the Association, and the wife is a trained nurse too. I find they work admirably. The sick are far better looked after than they were before in those little attentions in regard to which women are so needful. The comforts of the bed are so much increased, and the various little attentions in sick nursing, which can never be done by a man, are properly carried out by female nurses. I have not extended this method so far as Dr. Turnbull and Dr. Robertson have, but I am watching what they are doing, in the hope that we may be able to extend it more fully.

Dr. ROBERT JONES.—I should like to say one or two words in praise of male attendants. I cannot but think that in the large number of cases with which we deal, especially at Claybury, we have a different type from those in the urban districts outside London, or those in rural districts. Of course one knows very well that the presence of females exercises a very considerable inhibition upon men; and if insanity is to be regarded as a loss of inhibition, there, to my mind, comes the personal magnetism, or personal effect, of the female nurse. We know very well that when the ladies have risen from the dinner table the stories will not bear analysis; just so it appears to me to be with the insane. You bring them to associate together at entertainments, and you will find occasionally that even the most excitable will be tolerated as an agreeable neighbour in the entertainment room. I should like to know whether Dr. Turnbull looks upon this question from the maintenance point of view. It is, of course, cheaper to run asylums as far as you can with woman labour, and I should like to know whether that entered into his consideration in regard to female nursing. It does seem to me that a good deal might be said in favour of the male attendant. As an example of that I have at the present time a male patient who swallowed a mutton vertebra, and in consequence of which he had to go to the London Hospital, where he is at the present time, having undergone the operation of œsophagotomy. His surgical needs are looked after by the female nurses of the hospital, but he has one of our own male attendants by day and another by night; and I learn that the attendance given by the male staff is very much appreciated indeed by the hospital authorities. We know how difficult it is to keep patients from having bedsores in the late

sages of general paralysis; and I think at one of the asylums mentioned by the Lunacy Commissioners, *vis.*, that at Yarmouth, for sixteen years they have not had a bedsores; and there, I believe, the nursing has been carried on by male attendants. It is not that male nurses are inefficient, but it is, I presume, that the female nurse has a very distinct mental effect upon the male patient. I was very much surprised to hear of the mixing of the staff at the asylum under Dr. van Deventer in Holland. I had some reports sent to me in regard to Dr. Deventer's asylum, and I am glad to find Dr. Turnbull's personal reminiscence corroborates these, and that his own experience has been so happy in this respect.

Dr. OSWALD.—I desire to take part in this discussion, but first of all I wish to congratulate Dr. Turnbull on the very temperate and able way in which he has opened the discussion which is now before us. We recognise Dr. Turnbull as a pioneer in this department, and all of us who have adopted female nursing in male wards look upon him as our master, in that we are all practically imitators of his method. In Scotland during recent years much attention has been directed to this subject; and very few of the Commissioners' Reports on any Scottish asylum have refrained from mentioning this method of nursing, commending it if it existed, and if not already adopted, strongly advising that it should be introduced. I desire to specially agree with Dr. Turnbull as to the disadvantage there is in having a permanent mixed staff in any ward; and, if the evidence of the male attendants is to be taken, there are certainly male patients for whom female nursing is not only to their harm, but very much to their harm. Quite recently I had an application from an attendant who had been a long time in a Scottish asylum which is adopting female nursing in the male wards. This attendant said his only reason for leaving was because he found the presence of females in the ward was producing in the patients the very symptoms that he was put there to try to avoid (hear, hear); and he said for that reason he felt he could no longer conscientiously do his duty, and therefore he asked to be relieved from the position which he held. Quite apart from the evidence of attendants—and I believe there is still a large and useful scope of work for male attendants in asylums,—I think if one takes the evidence of patients there are undoubtedly those who would rather not be nursed by female nurses. I had five years' experience of this method, and I think at Gartloch we were among the first after Dr. Turnbull to introduce it. We had there about seventy men under female nurses, and I was in the habit, when patients recovered and went away, of asking them to give me their opinion and to state whether they preferred to be nursed by men or by women. In a few cases I had letters from patients who said they had thought of asking to be removed from the wards where nurses were in charge, to the asylum wards where male attendants were on duty. They gave their reasons for it, and they were perfectly good and obvious. I think for that reason we ought to consult the wishes of the patients, and I do not think the verdict would be unanimously in favour of the nursing being undertaken entirely by women. On the other hand, I believe there is a very large class of patients who can, with advantage to themselves, be nursed by female nurses. And it is a fact that epileptic and other irritable patients are more easily soothed—there are fewer outbursts of excitement, and fewer trivial accidents happening—when you have these patients nursed by women. But I am specially of the opinion—and I would wish to emphasise my agreement with Dr. Turnbull on the matter—that it is inadvisable to have a mixed staff in wards. I have tried it, and found it to be not what it should be: the nurses did not like it, and the attendants did not like it; and the nurses would do things for patients if they were alone which they would not do if male attendants were with them.

Dr. THOMSON.—I take some interest in this subject. I wrote a communication to the *Journal of Mental Science* a year ago because I was much struck by a paper which was read by Dr. Robertson at the annual meeting, I think in Edinburgh. It was reproduced in the *JOURNAL*, and I was very much astonished and struck by it. I am also astonished by what Dr. Turnbull said to-day in advocacy of this, to my mind, preposterous nursing of male insane patients by females. I think the whole subject is summed up in the meaning we attach to the term "nursing," the term "sick," and so on. I quite understand and readily admit that women nurses do as well as men—I deny they always do better—in nursing the sick; and by the sick I mean those who are in bed. I mean not only

those who are being treated in bed for their acute mental trouble, as seems to be generally done, but those who are bodily sick. I admit that they might be nursed by women nurses; but one must consider how very few actually sick one has in any asylum. I cannot help repeating a great deal of what I said in that communication to which I have referred. I go round my asylum to-day, with 450 male patients perhaps, and I do not find half a dozen sick people in bed. These cases can be analysed. What are they? One may have an ulcer in his leg, another may be in the last stage of general paralysis, another has an ailment which might occur to anyone. That these people can be nursed by women I admit; they may as well be nursed by women. We have heard this general talk about nursing by females, using nursing in its widest meaning; but what does this mean? I maintain that there is no nursing to speak of required. What the majority of our patients require is attendance; they require all the assistance that is necessary for people who cannot take the initiative themselves. They require dressing, and so on, in the same way that a very old gentleman wants a valet to dress him and help him when he has a call of nature. In general hospitals we find that while patients are in bed the female nurse will do anything for them; but as soon as the man is convalescent and leaves the bed he attends to himself—his bathing and his calls of nature. Are we to apply that arrangement to insane or asylum patients? Or what is the detail of the arrangements adopted? Do the women nurses accompany these bodily healthy patients to the lavatory? I was hoping that Dr. Turnbull, or some of these advocates of women nursing male patients, would tell us the details. It is all very well to talk about the womanly and sweet qualities, and about women having a benign influence upon men. I grant you that women have an influence on men, and men on women. The reason, I am told, that female assistant medical officers are not more popular in asylums is because they have not that moral control over female patients that males have. From Dr. Robertson's paper I may be permitted to quote. He said, "At the times for the calls of nature and bathing, and so on, they are handed over to men." Can anything be more preposterous than that in dealing with insane patients? It is impossible that any discipline, or management, or fixation of responsibility can be carried out if when a patient wanted to go to the lavatory he was handed over to a male attendant, and when not he was looked after by a charming female nurse. No, sir; it is part of this great fad which has come over us to run everything on hospital lines. An asylum is not a hospital, and a hospital is not an asylum. We ignore the important and capable qualities of the male attendant. My experience is contrary to that of some others who have spoken. I have greater confidence in the nursing capacity of my male attendants than in that of my female nurses (hear, hear). That is all I have to say, except to protest generally against this absurd idea of employing trained hospital female nurses to act as attendants on the male patients, because that is what it amounts to. No one denies that the few sick in an asylum could be nursed equally well by women as by men, and in certain asylums where the proximity of the male and female divisions will admit of it the women might be employed a little more in nursing and feeding the melancholiacs who would not take food from a man. We do that as it is. In some asylums it would be easy and in others difficult, according to the geographical position of the ward. But in a general way I wish to enter an emphatic protest against the employment of women attendants on men in asylums.

Dr. MORRISON.—Fortified by the successes and failures of Dr. Turnbull and Dr. Oswald, who very kindly placed at my disposal their experiences, I placed a new male ward of fifty beds entirely under female nurses. I selected a mixed class of patients for that ward; they were not only seniles, but epileptics, general paralytics, and cases of recurrent mania and melancholia—in fact, a well-assorted class to test the system,—and there was no doubt that the general tone, the general form of nursing and care, and the general results, compared with those in any other section of the asylum, were entirely as favourable in this ward as in any other ward in charge of female nurses. But more than this has been achieved. Cases of melancholia, long since classified among the chronic unrecoverable cases, after being placed in this ward not only showed a marked improvement in their mental condition, but half their number have been discharged recovered. I attribute this entirely to the mental stimulus which these men received by associa-

tion with the gentler sex. I have gone further, and in this ward of mixed cases I have put a night female nurse in charge. She attends during the night just as a male attendant would, and if assistance is required to attend to weakly and bed-ridden patients she receives the assistance of the night female patrol, who visits at intervals. The patients in this ward are as substantially cared for in every respect by the female staff as they would be by male attendants; and although it is only eighteen months since we opened this ward, my experience leads me to say there is a great future for the nursing of the male insane by female nurses. Of course we do not expect acute homicidal cases, or the class of men who are given to exposing their persons, to be exactly a suitable class to place under female care, but if you exclude such classes I am of opinion that every other class of cases can be advantageously placed under female nurses.

Dr. TURNBULL.—There is very little to reply to, especially after the way in which you, sir, have introduced the discussion. I am glad you gave the system a trial, and I recommend Dr. Thomson to give it a trial before condemning it outright. With regard to what Dr. Jones said on the question of expense, that did not enter into my calculation. At the Fife Asylum it was not done on such a scale as to greatly affect the expenditure, either one way or another. At the same time I have heard Dr. Robertson say that it does work out better, and that for the same expense you can double the number of the staff. Dr. Jones rather gave the impression that the good effect was simply a mental or a moral one produced by the nurse upon the patient. I think it goes much further than that, and it was what you yourself indicated, that they can do those little touches of nursing and attention to patients and the details of management in a way that few men can. Dr. Howden, of the Montrose Asylum, used to say if he were ill he would not have a female nurse; he would have a man. And one allows for the personal equation; but nursing cannot generally be done with anything like the same deftness and tact by men as by women, and I think we are doing quite right in taking advantage of the feminine faculty. It struck me very much in Meerenberg that it is not a good thing to mix the staffs. It is better to secure the best points in each, and not run either side to the extreme. Dr. Thomson says he might not have more than a dozen cases ill in his asylum of 450. We have 270 males, but we have six general paralytics in bed, besides our other sick cases in the ordinary work of the asylum. And if you admit that bodily sickness is as well nursed by women you must also admit that general paralysis is a form of bodily sickness in addition to its mental symptoms. I was very pleased to hear what Dr. Morrison said, because he did me the honour, before he introduced the system, of writing and asking my experience. He gave me the impression that he was going to introduce it at one fell blow all over the male side, and I was afraid that might prove a failure. But I am delighted to learn of his success on the scale on which he has actually employed it. The system has given me much satisfaction, and I think every one who tries it on right lines will find it a success.

A Case of Double Consciousness. By ALBERT WILSON, M.D.

THIS remarkable case of double consciousness was under my constant observation for about four years.

It involved chiefly mental phenomena, and though I could find no evidence by any physical signs of alternating action of the two halves of the brain, yet the status should be kept

in view by experts in determining a possible causation for these events.

For the purposes of classification I will call her normal self A and her abnormal condition B, subdividing it into B 1 to B 12, as she exhibited not merely one abnormal state but more than a dozen such sub-stages.

At the beginning of her illness the abnormal appeared for short periods, from a few minutes to an hour ; but as time went on the normal decreased in time and frequency, occurring only for two or three minutes, and at intervals of days, until it has finally completely vanished, and she has now been living in the abnormal condition for years, making her own way in the world.

There are three conditions about these several abnormal sub-stages which are constant, and should be kept in view throughout the history :

1. Each sub-stage appears and disappears at quite irregular intervals.

2. Each sub-stage has its own special characteristics.

3. Each sub-stage is continuous with itself,—that is, when any particular sub-stage appears it commences where the previous attack of the same sub-stage left off. Therefore any particular sub-stage has its memories limited to its own events, and knows nothing of the life or incidents of any other sub-stage. Each sub-stage or personality is, then, complete in itself.

But the abnormal had a faint glimmer of the normal. Perhaps this might be aided by overhearing conversation about herself. In the normal, however, she was absolutely ignorant of what happened in the abnormal. This applies also to physical suffering, for in one abnormal stage she was liable to toothache, and if she returned to the normal the toothache likewise disappeared.

These separate personalities were “switched” on and off without apparent rhyme or reason. Yet there was always some physical disturbance. It might be pallor and exhaustion of passing duration, or she might fall off a chair, becoming cataleptic or paralysed in the legs, or there might be loss of consciousness approaching coma. There never were epileptic fits, though about three times she had convulsions, and once or twice complete coma.

Among the varying personalities, there was to begin with

more or less complete loss of all previous knowledge ; whilst her character or Ego was much modified. Thus she might become an amiable child, or cruel and wicked, or a hopeless imbecile, blind and paralysed, a deaf mute, a maniac, or finally lose all sense of moral tone and responsibility, either to thief or even to try to kill.

The patient was a bright, intelligent girl twelve and a half years of age at Easter, 1895, when first taken ill with influenza. There is no history to record except that there was great trouble shortly before her birth, when the home had to be broken up.

Though the influenza passed off in a week, yet she was left with an attack of meningitis, and remained in a serious condition for six weeks. There was a high temperature, intense headache aggravated by light and sound, and great weakness. In the third week she was delirious and maniacal. She had intense fear, chiefly of imaginary snakes. During the attacks, though so weak, she developed great strength. She was ravenous for oranges, and this detail indicated later that this was the first of the abnormal personalities. She was mentally blind in that she could not recognise people, yet a hand or any crease in the counterpane became to her a snake. In the fourth week fits occurred ; first choreiform jerkings, then opisthotonos with lividity followed by coma. These fits would occur ten to twenty times a day. In the fifth week recovery set in and intelligence returned. In the sixth week catalepsy developed with paralysis of the legs, and quite suddenly she developed this double consciousness. It occurred in this way. Whilst in bed reading or playing with her dolls she would commence shaking, and clear a space around. Then she would say, " It is coming," turn a somersault, and sit up on the bed in this new personality. Often she would call out " Holloa " as if unexpectedly greeting those around her. Her facial expression was altered ; it became childish. She also clipped her words like baby talk. She did not know the names of things. If asked about her legs she would say, " What dat ? " " What legs mean ? " and if touched would say, " What ? dese sings legs ? " and so on. On the other hand, if one touched her nose she might call it her ear ; so that she had a store of words, only not the proper associations. She also reversed qualities, calling white, black ; black, white ; red, green ; and so on.

When asked to read, she would misname letters, or call them alternately N and O; but she learns quickly. As to writing, she can copy, but cannot write to dictation, as if some word-deafness. She always writes backwards; not mirror writing, but commencing at the tail of the last letter of a word. She applies nicknames to her family and friends, but this had happened for two or three days before the first somersault, when she showed a gradual change in her whole manner. Thus she called her father "The Tom" or Tom, her mother "The Mary Ann," the nurse "The Susan Jane," her sister F. "The gigger," her sister A. "Sally," her brother F. "George," Dr. H— "The Jim," Dr. T— "The Sam," and others. During the attack she says she is "a thing" and not a girl, and she refuses her proper name. Using her correct name, she says she is very cross with that person for going and leaving her. She also says she hates that person, for every one likes that person but does not like her, meaning in her present abnormal state. So the abnormal B has some conception of the normal A; but when the normal A returns she knows nothing of B the abnormal, yet knows that there is some sort of attack which she describes as "going to sleep," and says she feels as if she were dying. There is inability to stand, but she can move her feet and crawl. Cataleptic attacks occur. Sometimes she is drawn up like a ball, so that one can lift her *en masse* by one limb. They last about ten minutes, and any sudden noise or start will bring them on. It was not until July 20th, 1895, that I saw her in her normal state. She suddenly changed to the normal, and was very modest and well-behaved for a child of her age. In the abnormal she was noisy and very familiar in her manner. She told me she knew nothing of these attacks, and she said she had not seen me before. This is very remarkable, for I had seen her nearly every day for ten weeks, and she had heard my voice, so that in her abnormal condition she and I were very old friends. In about five minutes she changed back to the abnormal. She put on a very annoyed expression, pouting and frowning. In a minute her features relaxed, she smiled, and began chatting in her usual way.

I have kept a chronological record of the various sub-stages, which would fill a small volume; but I propose only to deal with the chief sub-stages, leaving out five or six which were ill-defined. As a rule she gave herself a name in each sub-

stage, or, if not, we suggested one. Thus in the last described she was called "a thing." We have now seen two sub-stages :

B 1, the mania, with fear of snakes and great thirst.

B 2, "a thing."

Whilst admitting the intricacy and dense obscurity of this and similar cases, yet I wish to advance a theory for consideration. It seems to me poor fun to label this hystero-epilepsy and toss it aside, shutting one's eyes to the vast issues which such a case raises in our social economy, especially in the question of the day, Individual Responsibility, whether viewed from the legal or the moral aspect. I think the tendency of to-day is to regard hysteria and its many manifestations as a disease of the sympathetic system. We all know the patches of flushing that occur on the face and neck of certain persons; while in opposition to the local hyperæmias we have local anæmias and lividities as in Raynaud's disease, chilblains, so-called "dead fingers," and allied diseases. We have also local hyper-æsthesia and local anæsthesia.

Are not all of them dependent on vaso-motor changes? These we might term the coarse manifestation of disturbance in the sympathetic system. If we instead apply the same vaso-motor changes to the delicate cortex of the brain, must we not be prepared to find aberrations from the normal brain functions?

There is exaggerated ideation and motor explosion in cases of cortical hyperæmia or congestion. Such might be the case here during the maniacal attacks B 1. But where loss of memory occurs as in the B 2 sub-stage, is it not possible to conceive that the blood-supply may have been shut off in the Broca area, or part of it? The microscope reveals to us only some of the finer blood-vessels and capillaries of the cortex, but it has not yet shown us the most delicate system of channels which bathe the individual cells and fibres in lymph or serum. The spasm of one arteriole which we can see may curtail functions in a group or layer of cells or association fibres with very surprising results. Nor have we as yet traced the terminals of the sympathetic vaso-motor fibres in the cortex. Yet the same must exist; Nature would never leave her work imperfect. Therefore, while we must not dogmatise, yet we may speculate, and speculate with reason on an unknown physical condition which may have a vast influence on psychical phenomena.

B 3, or the third abnormal personality, was called "Old Nick," and was a very frequent and prolonged visitor. It first appeared on July 24th, 1895, two months after B 2 ("a thing") had occurred. B 3 ("Old Nick") stayed till August 8th and then disappeared for a year, returning July 12th, 1896, when it stayed for ten weeks. "Old Nick" had a very violent temper, but was always very sorry afterwards and said, "It is a naughty man that comes." "Old Nick" could as a rule walk, and could read and write from the first, so there was not the same amnesia for names and objects as in B 2. "Old Nick" also had the best health of any of the personalities, which perhaps throws a side-light on the etiology of neurasthenia.

The following incidents illustrate some of the special features of the case:—Whilst in this "Old Nick" state the patient's mother was ill in bed. The patient attended carefully to her mother, whom she styled "Mary Ann." One day she returned suddenly to the normal, and was both surprised and distressed to find her mother ill; and could not understand it, for her mental association was with the last normal period when her mother was up and in good health. The patient had several times been at the sea-side, but when taken in this B 3 stage to Maldon it all came as a new and surprising experience! She returned normal once or twice, and in a particular road, so her father conceived the idea of calling her persistently by name when she walked down this road. She would then return to normal, and after some time as soon as she entered that road she would, without any aid, return to her normal state, passing back to "Old Nick" when leaving it. The day after coming home, having been "Old Nick" on the journey, she returned to normal, and was very puzzled to explain her arrival, being unconscious of the journey.

The following event illustrates the continuity of the sub-stages:—On Sunday, September 20th, 1896, "Old Nick" left about 2 p.m. in the middle of her dinner. She stopped eating and fell off her chair dazed; when this passed off she had changed to another sub-stage. "Old Nick" next returned on a Sunday, April 4th, 1897, about the same time, that is during the dinner-hour. She was ill in bed in an imbecile state when she suddenly called to her sister, "What am I in bed for? I am quite well. You have been quick in getting my nightgown on me. Don't you know me? I am Nick." She smelt the dinner

and asked to go down and finish her dinner, thinking it was the same dinner she had left on September 20th.

B 4 was a deaf mute, and first appeared on August 8th, 1895, at the end of "Old Nick's" first visit. It returned five times during the illness, for a few days only at a time. It comes and goes quite suddenly. She makes her thoughts known by writing.

This brain area ought to be easily localised—namely, the centre of speech and hearing with their association fibres. Arterial spasm or anæmia of these convolutions might explain the phenomenon.

B 5 was a personality which only came once and lasted about three weeks. It arrived on December 1st, 1895. In this sub-stage she says she was only three days old, and knew no one at first. She understands everything in the house, and is very good in helping her mother. She writes in the ordinary way, but if asked to spell a word does so backwards. She complains of pain in the left temporal and parietal regions.

B 1 arrived again on December 20th, 1895, when the last sub-stage disappeared. This I described as occurring in the third week of the illness. The features were violent mania, fear of snakes, great thirst and craving for oranges and lemonade, and headache; in fact, she was constantly asking for the water coil she formerly had for her head. This sub-stage and B 2 ("a thing") alternated until the beginning of March, 1896.

B 6 was a personality very like B 2 ("a thing"), but was gentler, more modest, and more refined. It appeared first on May 6th, 1896, and became a very constant visitor; in fact, she is now living in this sub-stage and supporting her own livelihood. The normal personality A was now a rare visitor, perhaps not appearing for a week or more, and possibly for only three or four minutes at a time.

B 6 we named "Good thing," or "Good creature," or "Pretty dear." It was not the same person as B 2 ("a thing"), because while "a thing" had now learned to read and write "Good creature" could not do so, and had to be taught. B 6 was more intelligent than any of the others, and learned French. A striking feature is that no other personality could understand French. B 6 also replaced B 2, which till now had been the common visitor.

Another instance of continuity of the different sub-stages was

shown in the following circumstance:—B 6 ("Good creature") suddenly left at 9 p.m. on December 29th, 1896, returning on the evening of May 13th, 1897, and was excited and disturbed because she could not explain her surroundings. She had jumped suddenly from December to May, from winter to early summer. She asked how the cut flowers were there, as it was winter according to her memory, and being lamp-light she could not estimate the season.

On this occasion in May she changed from "Old Nick" to "Good creature" at about nine in the evening, and returned back to "Old Nick" in daylight on July 1st. She was again much disturbed to find it was daylight, for when she was last "Old Nick" the lamp was lit, and her father, whom she called "Tom," sitting beside her having his tea. She expected to see him, whereas he was in the City.

A more remarkable illustration is found in connection with her two visits to the sea-side. In August, 1896, she went as B 3 or "Old Nick" and bathed and learnt to swim. In 1898, two years later, she visited the same place as B 6 or "Good creature;" she then was quite ignorant of the place, and had no memory of being there before, nor having bathed. Two letters written to me, one at each visit, illustrate this conclusively.

B 7 named herself "Adjuica Uneza," and came suddenly in May, 1896, and stayed for about a fortnight. She could not walk, and at first was very dazed. She had a remarkable memory for the small events of her childhood up to the date of her influenza, but she knows nothing that has happened since. Her memory of events which happened when she was between two and three years of age was very remarkable. As it has been shown by Bolton that the more superficial layers of small pyramidal cells of the cortex develop later than the deeper layers of larger pyramids, is it possible that the deep pyramidal layers were now called into activity by some stimulation, vascular or otherwise?

It commends itself to common sense that the deeper layers precede the more external and superficial in development and evolution. The converse I have seen in the brain of an alcoholic wreck, with mental enfeeblement and degeneration even of the lower nervous system. In this case the superficial layer of small pyramids was distinctly atrophied. The association fibres did not show a corresponding amount of degenera-

tion and disappearance as if they were hitched on to deeper strata of cells. The point that I wish to raise is that the vaso-motor changes would first affect these more distant cortical areas rather than the deeper strata, producing more psychic disturbance.

A sharp line of demarcation caused by the influenza and meningitis shut off the more superficial and external layer of developing pyramids with its mental pictures and memories. We may regard these higher psychic areas as damaged, for we see the ravages of meningitis, especially among the children of the poor. While many appear to recover and grow up to adult life, may not their whole personality be altered, as in this case? How many criminals and lunatics are handicapped in this way from childhood! The law, while keen for justice, is aptly personified as blind to mercy. Is it not for our profession to collect evidence which might lead to a better protection for society and a different principle on which to deal with the ever-multiplying criminal population?

B 8 was a short-lived personality, lasting only four days. On June 20th, 1896, she had convulsions, and was very lost. The following morning she knew no one, and said she was only born last night, so how could she know anything? However, she could read. Perhaps this is more a confusional or lost condition, post-epileptic. Still she was quite ignorant both of her normal self (A) or of any other sub-stage.

B 9 was, however, a most important sub-stage and a very persistent visitor. In this she was imbecile, blind, and at times deaf, and usually paralysed in the feet. The striking feature in this case is that when blind she could draw, while at no other period of her life, either normal or abnormal, had she any ability in drawing. Is not this some ancestral devolution or throw-back? She would call out for "picters" and "pencil," and set to work drawing the fashions which one sees in the illustrated papers. She was guided entirely by touch. We proved this by moving the paper when she was not touching it. She at once discovered the error and commenced feeling for the pencil marks, resuming the drawing in a correct manner. I also proved the blindness by holding a book between her eyes and the paper. Her eyes were, however, normal, and Mr. Tweedy kindly confirmed this opinion. Once or twice when examining the retina, the stimulation of the light brought her

to the normal condition. In this state she was a pitiable object, the vacant face expressionless, the eyes protruding as if the ocular muscles were paralysed, and the pupils widely dilated. Usually she understood nothing, and there often seemed no way of communicating with her. Sometimes for hours she would roll beads on a tray; at other times she wrote verses from memory, or the names of persons she knew; or she would copy, only in this she was guided by touch and not by sight. This seemed the most remarkable feature in the whole case. To what was the blindness due? It appeared to be organic, all the ocular apparatus paralysed. The calcarine area would probably escape. Dr. Bolton has shown this to be the visual area, in the sense of the recording sensitised plate, but here there was no psychic blindness, for her visual ideation persisted. It was the photographic apparatus which was disorganised. In seeking an explanation, there may have been paralysis of the roots of the second, third, and fourth, ciliary portions of the fifth and sixth nerves. Perhaps all was connected with superactivity of the cervical sympathetic, shutting off vascular supply in these ocular districts which must be connected. Other opinions might incline to a paralysis of Bolton's visual area.

Was the imbecility due to the blindness, or did it coincide, due to a shutting off of higher psychic centres, as the prefrontal? How, also, can we account for the extra keenness of touch and hearing, as with those who are blind for years? This mental darkness lasted for three to four weeks from December 29th, 1896; but she returned suddenly to the normal on two occasions. On January 3rd, 1897, she suddenly regained her sight and became her normal self for about two minutes. She was quite her ordinary self, and called to her sister, "I can see you," and asked some questions. On January 17th she also returned three or four times to the normal, and told her mother she felt quite well, but sometimes felt "to be dying and to go right away." When the normal state occurs she can walk. I tried to rouse her out of this imbecility by beating a tea tray with a key; but she took absolutely no notice, though the noise was deafening and unmusical in the extreme. As time progressed her intelligence improved a little; she began to know people and things at more lucid intervals.

At the end of January she had some vision, but was short-sighted. She could discern colour and pictures four inches off, but could not see about the room. This we proved by testing her in various ways when she was able to walk and grope about. Her hearing became very acute, compensatory for the more or less complete blindness.

B 10 was a sub-stage showing decided moral degeneracy. She herself was so conscious of her wickedness that she named herself "The dreadful wicked creature." She was violent and cruel, bullying her little sister, and on one occasion would have forced her into the fire if help had not arrived. Does not this case throw a side-light on the dangerous criminal? Are not the more rudimentary brain cells, which have to do with the lower animal functions, let loose in fury and without control or guidance? To what extent, then, are such responsible? Ought not the State to care for uncontrollable unhealthy beings the same as for lunatics?

Another moral delinquency was shown in the sub-stage B 11, but of a more harmless type. This sub-stage was rather mixed. She could walk, and resembled B 2 in that she wrote and spelt backwards, but also resembled B 6 in that she understood French. Her chief characteristic was that she was bent on stealing, and defended it partly on so-called Socialistic principles. Thus she argued, "If people don't give you things, why, nick them. Quite right too, if you are not found out." She also carried her object into practice, and one day took an orange from a shop door, but seeing a policeman approach went back and replaced it and made off. Here is exhibited also the protective instinct after the act.

I stated before that pain might occur in one sub-stage and be absent in the normal. This was demonstrated in the case of toothache. Whilst in B 2 sub-stage ("a thing") she had a good deal of toothache. It always disappeared when she became normal. On one occasion we gave her chloroform during B 2 stage and extracted the tooth. She was very unwilling at first, but most pleased to be free from the pain afterwards. Her father coaxed her to the normal state (A), and this lasted for ten minutes. She at once detected the gap and the blood, and was quite surprised, and asked how it was she never felt any pain or knew anything of the chloroform.

A nerve specialist, the late Dr. Althaus, witnessed this perform-

ance, and was greatly interested in it. About a year later, when B 3, or "Old Nick," she again had toothache, but the toothache left her if she went into any other condition.

Another illustration of the isolation of different sub-stages was shown by the following occurrence:—Once, whilst showing me a toy wigwam which had been given to her in the B 3 or "Old Nick" stage, she being then in that state, she suddenly dropped the toy and passed into a new stage, a variation of "Good thing" or "Good creature" (B 6). In this new personality she commenced talking, but could not be induced to take any interest in the wigwam, which she declared she had never seen or handled before. As soon as she returned to B 3 she resumed her interest in the toy.

Another minor detail bearing on the same point was that some sub-stages feared thunder, others did not, and so on. When she grew up to be about sixteen, the normal stage (A) had practically gone for ever. She was sometimes B 3 ("a thing"), but more usually B 6 ("good creature"), a very nice docile child. I instructed the parents as to careful training, and they had broken the habit of baby talk and the forward free manner which belonged to almost every abnormal personality. They also called her by her proper name, and she would say, "I suppose such is my proper name;" "I know I have been ill and done funny things, I have been told about it." Her general health had all through been attended to, and when crippled she rode in a bath-chair. She was by no means helpless or stupid. Often in these abnormal states she did errands and made calls, or went to church alone. Menstruation, which was irregular at first, never made the slightest difference so far as we could detail.

When about seventeen she developed another modification, perhaps a personality, B 12; in it she was very self-willed, and would not listen to her parents. She had a great affinity for the opposite sex. She announced that she wanted a young man and would have one. She carried her point, leading the attack. However, by careful supervision and tact all went well. Perhaps this may not be considered an abnormal stage, but the uncloaking of the normal. This difficult stage of affection for the opposite sex seemed to be paroxysmal, and fused into B 6 or "Good creature." It did not persist. As B 6 or "Good creature" she gradually took her place as an ordinary individual.

No one would suspect any alteration, yet one who knew her can see that the original Ego, the sum of personalities, is gone.

This case would suggest that whereas heredity and ancestry form the basis of mind and modify the type, experience and education form the superstructure. Education and experience must equip various groups or districts of cells and association centres. The more groups so developed, the higher the state of memory and intellect. Thus each life, or the true Ego, is made up of so many active mental centres or personalities, some good and some bad according to circumstances, inherited or acquired. Where the binding cement is weak, we get the mentally unstable as here, and this opens the very serious question which constantly affronts us—that of Responsibility.

Résumé of Sub-stages.

B 1. Mania, fear, thirst. Rare visitor.

B 2. "A thing." Writes backwards, amnesia, childish, catalepsy.

B 3. Often paralysis of legs, ignorant. Very constant visitor for the first year.

B 3. "Old Nick." Bad temper, can read and write. The best health of any of the sub-stages. Frequent visitor for three years.

B 4. Deaf mute. Made five short visits.

B 5. "Only three days old." Came once.

B 6. "Good thing" or "Good creature." Like B 2, but more refined and more intelligent. Had, however, to learn reading and writing afresh. She learned French, and was the only one who did so. Gradually replaced B 2, and after two to three years became permanent.

B 7. "Adjuica Uneza." Only came once. The features are a remarkable memory for the events of her life previous to this illness, extending back to when she was two years old.

B 8. One visit for four days. "Only born last night." Mentally blank.

B 9. Imbecile, blind, sometimes deaf, and motor paralysis; could draw beautifully, the only time in her life.

B 10. Moral degeneracy. Cruelty and violence.

B 11. Allied to B 2 and B 6. Tendency to steal and Socialism.

B 12. In adolescence. Fond of the opposite sex. Self-willed. Resented control.

DISCUSSION

At the Annual Meeting in London, July 17th, 1903.

The PRESIDENT.—I am sure we are very much indebted to Dr. Wilson for this very excellent and very fully described case of double consciousness; a more interesting case it would be very difficult to find. The manner in which the facts are stated is excellent; the varying mental phases of his patient are so accurately described and are in such full detail that they leave us no doubt as to the completeness of the case. There was one point which struck me, namely, that to which I alluded in my address yesterday—the question of re-education. We are finding at the present time that many cases of insanity drifting to the chronic type can be re-educated back to mental life, and I have been very much surprised by the possibilities in this direction. That is surely a point which a paper like this brings to one's mind, and I hope the discussion which is about to open on this excellent case will bear out the views that I hold.

Dr. LLOYD TUCKEY.—I would like first to congratulate Dr. Wilson heartily upon his paper. It is a particularly interesting subject to me. I was introduced to it by Dr. Myers, who wrote upon it as far back as 1886 in an article in the *JOURNAL* dealing with the history of a case of double personality. Since that time I have come across a number of cases. The most interesting lately has been reported in *Brain*, and also in the *Journal of the Society for Psychical Research*, by Dr. Morton Prince, one of the physicians of Boston. There are many of these cases, but I have never come across a case so interesting as Dr. Wilson's, and never one so fully reported. There are two or three little points which I might be allowed to comment on. One was with regard to the memory. In the other cases I have read, No. 1 (normal) personality was not aware of what happened in No. 2, No. 3, or No. 4 states; but generally the more advanced personalities were aware of what happened to Nos. 1, 2, 3, and so on. This condition was very often assigned, especially by French observers, to the double action of the brain, one side of the brain functioning and the other being in abeyance. But when one came to deal with three or four personalities of the same body I do not see how that theory could any longer be held. I have myself come across four or five cases of double personality. The only case I was able to follow up thoroughly was that of a bank clerk who was rather addicted to drinking—not to great excess, but he got drunk occasionally. On one occasion, a Friday, he disappeared from the bank and did not come back. He was suspended from the bank, and his family was greatly distressed. He turned up the following Monday, not knowing what he had been doing, only saying he had found himself at an hotel at Southampton on Saturday night, but he did not know how he got there. He took train back to London, and finally got home to his wife and family. I knew one of the directors of the bank, and approached him with the view of being allowed to hypnotise the man. I did so, and though he had no recollection of what happened up to the time at which he came to himself at Southampton, yet in the hypnotic state we were able to tap that level of unconsciousness, and he very slowly, in answer to our questions, disclosed exactly what had happened during the thirty-six hours of apparent unconsciousness; and I was able to corroborate the statements, because he called on various friends at Clapham Common and Guildford, and they were good enough to come and see me. They told me he had called, and that though he seemed rather dazed, and they thought he had been drinking, still he was rational, and able to get about by himself. The idea on his mind was that he was on a holiday, and was going by sea from Southampton to Dublin. He had made the trip once before, and he thought he would repeat it. He had no sense of responsibility; he left his wife and children without any news of him, and he seemed not to realise the necessity of letting the bank know where he was. The other case I heard of, but have not been able to get into contact with. The subject was a highly educated Oxford man, who had on three occasions gone off into a state of double personality. The last time he was reading for the Indian Civil Service, and had a prospect of passing well, but he disappeared. His sister saw him into the train when he was going to Folkestone for the week-end. He disappeared, and nothing was heard of him by his family for ten days, when a telegram came from Malta. He had passed into his natural state at Tunis when getting on board a

French steamer. He knocked a man down, and the violent effort seemed to bring him back to his normal consciousness. He heard from the people around that the man had tried to rob him and snatch his portmanteau from him, and he knocked him down for it. He despatched a telegram to his people, and they sent him money by which he was able to come home. The idea was that he should be hypnotised, and that while in that state we should try to unravel what took place; but he objected, and nothing came of it. What made me think of hypnotism in these instances was the well-known case reported by Professor William James and Dr. Hodgson. Dr. Wilson was kind enough to show me his case some years ago, when I, and Dr. Bramwell also, tried to hypnotise her, but unfortunately we did not succeed.

Dr. MICKLE.—I am sure, sir, we are all charmed by the case which Dr. Wilson has brought before us. Indeed, some of us have seen the case in the flesh, through the courtesy of the author. When this paper is published, as I suppose it will be, it will be one of the most celebrated cases of the kind which we have. Of course the question as to what may be the condition which gives rise to or permits this secondary personality, or multiple personality, as in this case, is one which, in the present state of our knowledge, it is impossible to definitely answer. One can evolve a dozen theories on the matter, but perhaps the theory which Dr. Wilson brought forward is one of the most plausible. But I do not think that any of us can prove it scientifically in the present state of our knowledge. These cases are extremely important to us as physicians attending on the insane. I think that among our patients there is a good deal more of this kind of thing than is usually recognised, if one may judge by the text-books. I think if we study cases carefully we may find a whole range among the ordinary insane at asylums which would give a very large amount of light upon this subject when properly interpreted. In relation to that I would mention the change which occurs in the deluded insane where the patient, after a period of manufacture, so to speak, gradually arrives at the conviction that his personality is changed. For example, take the average common cases of paranoia, where the patient's identity gradually undergoes a change. At last he believes himself to be some person—human, or Divine, or devilish—entirely different from his original self, which still co-exists more or less; and although those personalities are co-existent, they throw light more or less on the successive personalities and alternations, such as we have had placed before us to-day. Indeed, in the very same patients one may trace at one time simply a change in the personality, at another the simple co-existing double personality, or, it may be, multiple personalities. In the case I have referred to, that follows upon a long train of reasoning. But there are cases in which those changes occur rapidly and suddenly—cases in which the person is well to-day, then passes into a state of delirium, and is two, or three, or four persons all at once. That same person, at another phase of his disease, may have successive stages of personality and alternation, one after another. Only the other day I observed a case in which there was a double co-existing personality at the same time; and then the patient successively thought himself to be not his usual self, but a sort of glorified usual self. And in alternation with that he was a personality who was under the influence of the devil—in fact, was himself converted into a devil. The language in the one showed he was in a state of glory and happiness. He was in a heavenly state, although he did not imagine himself in the heavenly regions. In the other state he thought himself a devil, and his language was of the foulest and most filthy description, full of blasphemy, imprecations, and all sorts of sexual nastiness. Here, therefore, within a short space of time one had a patient who manifested both a double co-existing personality, and personalities existing in succession. In the latter case he simply identified himself at one time with the one personage—we will call it, for convenience, the heavenly personage,—and in the other he was a devilish personage; and he showed the two extremes that a human being can go to in relation to that particular point. One might go on speaking of the different forms of insanity, and discuss the subject from that point of view; but I merely desire to draw attention to the cases of *co-existing* personalities which may come on suddenly, may come on with medium rapidity, or may come on as the termination of a long subterranean process of morbid thought; as having important bearings on, and relations to, the cognate subject of *successive* dual or multiple consciousness or personality.

Dr. T. D. SAVILL.—I would like to add my congratulations to Dr. Wilson for the lucid though somewhat abbreviated account of the case which he has narrated. It was one which I had the pleasure of seeing in consultation with him some eight or ten years ago, and I very distinctly remember the point which he emphasises in his paper, how each of these different states took up the thread of the memory of the previous occasion. For instance, this child, when I first saw her, was in a particular state, I forget which; she was then changed into a state which had ceased previously during the dusk of the evening, when the gas was about to be lighted. And, although it was broad daylight when she returned to that state, she picked up the thread of that condition, asking if the gas was not going to be lighted. It was very instructive, and I think these cases would very well repay a committee or sub-committee of investigation at the hands of this Society. One very remarkable case was that of a lady, a painter, who went to a neighbour of mine in the same street. The last time she was seen was when she turned round the corner of the street in which my house is situated. She was found somewhere in the north of England. Of course it is quite admitted that it is a psychological phenomenon which we are dealing with, and therefore it properly comes within the scope of this Society. But, as a general physician, one comes across many cases where dual consciousness is only a subordinate feature of the case. I had the pleasure of seeing—in consultation with Dr. Meredith, who is here to-day—two years ago, the case of a young lady who went to the Queen's funeral, and in whom the excitement, assisted perhaps by alcohol, brought on what was evidently a hysterio-epileptic seizure. As she came to out of it she was practically in the condition of a child, and she had renamed herself, much in the same way as Dr. Wilson's patient did; and she presented other features altogether different from her former self. It was some long time before she resumed her normal condition. She then remained normal for a time, and later, without very much provocation, she again assumed this childish state, associated this time with contracture of the left lower extremity and a certain amount of anæsthesia. Of course the pathology of these cases is very obscure. That hysteria is due to changes in the sympathetic system is a view which I have held for many years. But perhaps I might remind Dr. Wilson of Dr. Leonard Hill's researches. Dr. Hill holds that he has disproved the existence of the sympathetic mechanism in the cerebral vessels, and therefore we are at sea again. I think we must approach the subject from the clinical aspect in the first place. All these cases appear to have two leading psychical features connected with them. First there is a sudden loss of memory, or part of memory, and they do not use the knowledge and experience gained in their past life. In the second place there is a very distinctive alteration of character, not always for the worse, but generally so; there is a backward movement in the evolution of character. In these cases one is more inclined to adopt Myer's term, disintegrative personality, rather than dual consciousness. In investigating this subject I think that one ought to include those cases of sudden loss of memory, such as that extraordinary case which Charcot records in the third volume of his *Clinical Lectures*, where a man of very exceptional intelligence, and highly educated, suddenly lost his memory for forms and colours—for instance, he could not remember the colour of his wife's hair. In other respects he was all right. Secondly, in a certain proportion of the cases there is in association some physical phenomenon, some vaso-motor, motor, or other change which is manifest to the careful observer. The cases of dual consciousness are now fairly numerous, and I think this Society could usefully investigate them.

Dr. SCOTT.—The point which interests me is one of legal responsibility. When I heard that the question of double consciousness was to come on for discussion I was afraid that a new terror was to be added to life. We have kleptomania and all the other manias, and alcoholism, and degeneracy; and it is frequently very difficult to give a definite opinion in the case of a person whom one only sees for a short time, and as to whose antecedents one knows nothing. And I can imagine that if we are to go before a sceptical judge and an enlightened British jury and plead that a person should not be held responsible because his consciousness was in a Jekyll-Hyde condition, in a state of mental *alibi*, we would find our position a difficult one to establish. One of Dr. Wilson's remarks, I think, may perhaps convey a wrong impression as to what exists nowadays. He says the law, while

keen for justice, is amply personified as being blind to mercy. On the contrary, nowadays I think that our judges are almost too ready to accept the plea of insanity, and in most cases, I can say from my own experience, they do take a very merciful view. So far as the individual's responsibility is concerned, I think that we may regard double consciousness from the same standpoint as we do the recurrent insanities. If there is a want of motive, and all the other indications point to an abnormal state of mind at the time, the judge and jury will always be careful to consider these factors and to give due weight to any such evidence.

DR. ANDRIEZEN.—I believe a good deal of insight into the nature of double and multiple personalities might be gained from the study of epilepsy, and particularly cases we see in asylums. There we see instances where the sense of personal identity and individuality alters suddenly and profoundly in an epileptic fit. The new personality continues for days or weeks, and, as we know, it has various characteristics. Then, as the result of the occurrence of another fit, or some other event, the old personality returns and the new personality disappears. The ordinary epileptic insane patient forgets his name, and does not remember who or what he is. And if he is not insane, but a sane epileptic, like many who are at large, a sudden attack may make him wander about till he finds himself stranded somewhere. He may live thus many days, till his old personality comes back, and recalls him to his old life. A few months ago an undergraduate of Cambridge became a victim of this change of personality. He used to suffer slightly from epileptic fits; on one occasion he was out in the afternoon for a walk, and did not return. Some one met him, but when he was asked who he was he did not know. Finally he found himself in a village fourteen or fifteen miles away. He lodged there at an inn, and stayed some days without any particular incident occurring. At the end of that time his memory suddenly came back to him, his old personality returned, he knew who he was, and returned to the University. Such cases are not uncommon in medical literature of recent years. I remember reading of a case in America of a man who was an epileptic, lost his sense of personality, went to a far-off town, took up the occupation of carpenter, and lived and worked there for many years. He forgot he had a wife, and lived as a bachelor. After many years had passed he had a fit, his old personality returned to him, he remembered who he was, and returned to his old town and to his wife. How is it that epilepsy produces such a condition? We know that in the epileptic discharge every part of the brain is not universally affected; the epilepsy affects certain parts to the exclusion of others. What more likely than that in cases of the nature that I have quoted, an epileptic discharge occurring in certain parts or psychical areas of the brain should put certain centres out of action, the rest of the brain continuing to act? In that case the individual acts as though he had another brain, and therefore acts as a new personality. When the old centres come back into action that personality is restored. I do not think it is at all necessary to invoke the two hemispheres theory as proof of double personality. No satisfactory evidence has been given to show that one hemisphere represents one personality and the other hemisphere the other. The idea of Hughlings Jackson that one hemisphere is more voluntary and the other more automatic must be given up as wanting sufficient evidence. But others, of the French school, have taught that below the cortical level there is a whole series of centres which have to do with personality, and especially with automatic actions of various sorts; these they have described very fully. One is very glad to note that Myers and others of his school have come to practically the same conclusions. The fact that small portions of the psychical centres in the brain may be thrown out of gear from time to time would explain the large number of personalities which Dr. Wilson has reported. For instance, it struck me with regard to personalities Nos. 6, 7, and 10. One was intelligent and learned French, whereas the other had no knowledge of the language; and, of course, certain psychical centres connected with hearing and speech must have been involved in the one condition and been released in the other. There is no doubt about the throwing out of gear of certain parts of the brain. But why that occurs is altogether a different matter. This clinical and pathological way of looking at the matter, I think, must once and for all give the blow to the metaphysical theory that the mind is one and indivisible—a view which used to be taught us by our classical tutors, and which even in

psychological medicine is still largely held. It seems to me, from experience and observation day after day for the last ten years, that every new fact which has been added to our knowledge on the brain gives a blow to that theory. The reference which Dr. Mickle made to paranoia is a particularly happy one. The long-continued conflict between the hallucinations on the one hand and the normal integrity of the *ego* on the other hand comes to this in the long run—that the integrity of the *ego* in the brain is destroyed, and a new personality of some form takes its place, generally grandiose. The same thing occurs, in a speedier way, in the development of hypochondriacal insanity, where also the entire personality sometimes alters; and large numbers of cases can be quoted from classical literature—the lives of saints, and so on. All stages from hypochondriasis to hysteria occur. It is curious to notice in modern literature that many individuals who are abnormal in mind, show evidence of abnormal personalities, and who have led extraordinary and eccentric lives, should be held up as great philosophers and saints, as has been done. I was thinking especially of that famous visionary Swedenborg, who certainly had more than one personality. I would add a few words upon the vaso-motor fibres in the brain cortex. It is said they have not been observed, and all sorts of theories have been built upon it. There is no question but that they can be demonstrated in the cortex, and I am ready to produce microscopic specimens of my own to prove that there are vaso-motor nerve-fibres in the blood-vessels of the cortex, at any rate of the pia mater. In 1864, at our Congress held at Dublin, I showed some specimens; but since then many observers have shown this condition on a much more complete scale, especially by staining with methylene blue. Observers from France and Germany and America have demonstrated under the microscope that there are vaso-motor fibres in the cortex. So Dr. Leonard Hill's theory, whatever it may be supported by, cannot negative the fact that a vaso-motor system exists in the cortex. If it does exist there, then this or that centre may be thrown into greater activity, or may be diminished in activity, by vaso-motor disturbances, such as may take place in any other part of the body. I simply mention this fact to show that in building a theory of "multiple personality" the presence of vaso-motor nerves would show that irregular action of the vaso-motor system may also have some effect in bringing about this disturbance of personality.

MR. VINCENT PANTIN.—Dr. Wilson mentions that the colours yellow and green were reversed. If observers take certain mediums as subjects and study their ways they will find that many things get absolutely reversed—their writings, their ideas—under their other personalities, of which they have many. I think these are *bona fide*, whatever their origin may be.

DR. ROBERT JONES.—I would like to add a few words of congratulation to Dr. Wilson on the way in which he has correlated these sub-stages into one of the most interesting cases that I have ever listened to. I had the privilege, through his courtesy, of seeing this case some years ago, and I have been reminded since of what Dr. Clouston said at one of the meetings of the British Medical Association many years ago at Birmingham—that the tendency of these shifting personalities was eventually towards absolute disintegration. He mentioned the case of a student at Edinburgh who was frequently hypnotised, and who could be made, by suggestion, to change from one state of personality to another. He ended his days at Morningside. Mr. Pantin spoke of the reversal of sensation, and it is within the experience of every one that when we speak of a straight line we imply that it is not a curved one. This is fully apprehended in the theory of vision promulgated by Hering. In Dr. Wilson's case white was mistaken for black, and when one form of sensation is brought before our consciousness the opposite is immediately suggested at the same time. The interesting thing in regard to the pictures, which form so valuable a supplement to this paper, is the fact that the patient selected, as a predominant colour, that from the blue end of the spectrum. In the language of some ancient races there is no word for *green*, but the word in Welsh, for instance, which indicates the colour of grass is *blue*, and colloquial Welsh describes the grass as blue. It is curious that this patient should have selected by preference this elementary colour—although I admit others were also used,—indicating, if one may suggest it, a reversal, or a throwing back, as it were, to a feature characteristic of an ancient race. The whole of the ground has been traversed so ably by Dr. Mickle and Dr. Andriezen in regard to the phases of multiple conscious-

ness seen in various forms of insanity, that I need say nothing further about this aspect of the case; but, in addition to paranoia already referred to, the first stage mentioned by Dr. Wilson is, to a certain extent, closely allied to what we see in asylums in cases of premature dementia of young persons,—that is, an apprehensiveness or fear, such as the delusions of snakes and the cataleptic states already referred to. I think the best solution of these cases of multiple consciousness is to view them from the standpoint of evolution, *i. e.*, from the comparative anatomy standpoint, as suggested by Dr. Andriezen. The brain is not one organ, but a correlation of a series of organs which have gradually evolved from the simplest forms of animal life. In the nervous system of the *Annelida* you have all of these organs in separate segments. In the brain of man you have the various segments with their functions correlated into one organic whole—the visual area, the auditory area, the olfactory and other areas. Perhaps it is not surprising that occasionally these should be fundamentally disintegrated and tending to act one independently of the other. Furthermore, in this correlation characteristic of the healthy mind there seems to be a something, an “ego,” which has a higher “apperceptive” power, and which appears to dominate the whole of the various parts, but which appears dislocated in some of these cases. It is interesting, in regard to the visual phase, that the report of Mr. Tweedy showed that nothing abnormal could be found in the retina or the transparent media of the eye, and he himself confirms Dr. Wilson’s statement that upon examination nothing could be seen by the patient more than two feet away. I think we have had an extremely interesting communication, and I also think that the suggestion made by Dr. Savill is worthy of being taken into consideration by our President.

DR. WILSON.—Mr. President and Gentlemen,—I can only thank you heartily for the very kind way in which you have received my paper, which I felt was rather a long one, although I tried to condense the facts as much as possible. Dr. Savill’s suggestion is, I think, a very good one, and it would be a splendid thing if, especially in the great subject of our relations to the criminal world, we could have this subject more deeply investigated. I did not mention in my paper that Dr. Tuckey, Dr. Jones, and Dr. Savill had seen this patient, as also have one or two other medical friends, and that this girl always resisted hypnotism. When it was attempted she became what we term hysterical; she began to sigh and gasp, and was upset, and wanted it stopped. With regard to reversing things, that was very marked in the first stage, but not in all. I remember showing her two horses, one black and the other white, and she always reversed them. When this was done the colours were complementary. With regard to Dr. Andriezen’s remarks, I am very glad to learn from what he says that the sympathetic fibres have been demonstrated in the cortex. Of course, when we see a very fine vessel in the brain, the very finest we can see, that does not represent the finality of the circulation, because that fine vessel surely spreads out like a fan, and probably feeds a whole group of cells. With regard to the dual action of the brain, split up into centres, it has sometimes occurred to me in reference to comparative anatomy that we might get some idea of dual brain action from the lower animals. In our own case our vision converges; we only look at one object at a time; but most other animals have divergent vision, so that they may really be seeing two pictures in their brain at once. If we take the hare, which has its eyes at right angles, it must see two pictures at once—in their case there is no optic chiasma, but I believe the optic nerve crosses to the opposite hemisphere direct. So it is rather an interesting point how the brain of the animal does act when it sees safety on one side and danger on the other, for it has got to analyse things and bring in both mechanisms.

The Teaching of Psychology in Universities of the United States.⁽¹⁾ By CHARLES S. MYERS, M.A., M.D.

A SEVEN weeks' visit to seven principal universities in the eastern States of America is a sorry qualification for talking to you upon this subject. Nor, indeed, is it easy during the brief time at my disposal to give you a satisfactory account of the impressions which I formed during my visit. I can only hope that the shortcomings and inaccuracies of this paper do not exceed what may be called their normal number under such circumstances, and that you may be induced some day to repeat for yourselves experiences which I have been the first to enjoy with such pleasure, interest, and profit. Nowhere will your colleagues extend a warmer welcome to you, nowhere will they take greater trouble in displaying and explaining to you their institutions.

A true estimate of the position of psychology in the curriculum of American universities can hardly be formed without a brief survey of the general system of education which prevails there. In earlier years, one need hardly say, the training was far narrower and less liberal than it is now. The candidate for the B.A. degree had his educational career as carefully prescribed for him as if he were still at school, and he had little or no opportunity to deviate from it. At the present day the various universities of the United States offer every gradation between relatively elective and relatively non-elective systems of study. In most universities the undergraduate will find his course of work strictly defined during at least his first or freshman year. Little by little, however, the elective is gradually replacing the non-elective system. Quite recently Harvard, for example, determined to allow a very considerable measure of optional subjects, from which the student has to make his choice from the moment he is admitted to the university.

The danger of such a system, patent as it is to all, is increased by the absence of a special *ad hoc* examination for the B.A. degree. As a rule the degree is conferred solely on the results of the terminal examinations held biennially, so that, unless proper precautions were taken, it would be possible for a student, after having passed his three or four years at college, to take

his degree on the basis of a superficial and very elementary knowledge of many subjects and a detailed knowledge of none. This drawback American universities have largely succeeded in overcoming by a series of appropriate regulations concerning the relative number of elementary and advanced lectures at which attendance is required, and concerning the conditions of admission to advanced lectures. At Yale, for example, undergraduate studies are ranged under three heads : (1) languages and literature ; (2) mathematics, physical and natural science ; (3) philosophy, history, and the social sciences. Every student is required to have attended advanced courses in at least one of these departments, and to show at least an elementary knowledge of subjects in the two other departments.

It will now be evident to you why subjects, which in English universities are studied by the few, are in America taken up by the many. Take Yale, for instance, with her department of philosophy, history, and the social sciences. Every undergraduate has to show at least an elementary knowledge of some subject in this department, *i. e.*, of philosophy, psychology, ethics, pedagogics, logic, ancient, mediæval, and modern history, economics, politics, or sociology. A great number of American students take a course of economics. At one university I was told that on an average every student takes two courses of economics during his undergraduate career. This fact may be ranged beside another, *viz.*, that there are twenty-four professors, lecturers, and instructors of political economy and government at Harvard.

And so also it comes about that a great number of students take up psychology, either by itself or with allied subjects. Two hundred and fifty students, chiefly in their second or sophomore year, attend the year's course at Harvard, which is equally divided between the study of logic and the study of elementary psychology. At Yale a similar year's course on ethics and psychology was attended this year by 225 students. At Cornell the year's course on psychology, logic, and ethics is attended by 200 students. Princeton goes so far as to make psychology a compulsory subject, without which the B.A. degree cannot be obtained. The popularity of psychology is also shown in that it is taught in the upper forms of some of the better schools.

Of course such introductory courses in psychology are delivered for the most part to students who later will take no

direct interest in the subject. The scope of the teaching at Harvard is narrowed to the range of James's smaller book ; a few lectures on the anatomy of the nervous system are also given. With so large a body of students laboratory work is impossible, but in nearly all universities demonstrations are performed during the lectures. The optical lantern is largely used for this purpose. By the ingenious device of rotating a smoked glass disc in front of the lantern, reaction time and other chronometric experiments are carried out before a large audience. Experiments in colour-vision and binocular vision are demonstrated by the aid of twin lanterns. At Harvard the lectures of the introductory course are supplemented by short talks held periodically several times a term between small bodies of students and their instructors. At Princeton similar classes are held, but mainly, as I understood, to assist the duller and less diligent students.

Experimental work in the laboratory is only performed by students who intend to proceed further in psychology. Their number is a very small fraction—from one tenth to one fifteenth—of those who attend the preliminary course. At Columbia they are expected to have attended either a general course on experimental psychology or a special course, in which no less than eight lecturers take part, each being responsible for a few lectures in their own department of psychology, be it physiological, genetic, comparative, pathological, experimental, historical, or philosophical. By this means the student comes into relation with most of the teaching staff of the department in which he is interested. Later, more advanced courses are open to him in analytical psychology, educational psychology, the philosophy of mind, genetic psychology, and so on. At Pennsylvania the student spends two years at psychology, devoting the first half-year to analytical psychology, the second half-year to physiological psychology, the third half-year to synthetic psychology, and the fourth half-year to experimental psychology. Each of these half-courses comprises lectures and practical work of an hour and two hours' duration respectively per week. In the study of physiological psychology brains are dissected (there being no professor of physiology at Pennsylvania, save in the separate medical school) ; careful drawings are made ; blue ferro-prussiate photographs are distributed to each student, illustrating the coarse and minute structure of the

central nervous system. He pastes them in his note-book, affixing names to the various structures.

It would be wearisome to follow out at further length the various lines of undergraduate study pursued in psychology at the several universities which I visited. You will, however, hear with interest that men are offered at Yale a course of recent German psychology in their fourth or senior year, the class reading extracts from the works of Brentano, Wundt, Stumpf, Külpe, and others, while the different attitudes of these psychologists are explained by the instructor. At Harvard a half-year's course on the mental life of animals is offered, accompanied by lectures and demonstrations. At Cornell a course on the history of the psycho-physical work of Weber, Fechner, and others is given.

This brings me to the more detailed consideration of experimental work in the United States; and here you will expect something from me on the general equipment of their psychological laboratories. The laboratory in Harvard University has eleven rooms, in Yale it has seven, in Columbia nineteen, in Princeton five, in Cornell ten, and in Clark ten; these numbers generally include all public and private rooms of the department. Cornell has undoubtedly the best equipped laboratory, so far as human psychology is concerned. Two rooms here are devoted to vision, one to acoustics, one to touch, one to taste and smell, one to chronometric apparatus, one is a special research-room, and there is a lecture-room and a workshop. Both Clark and Harvard have rooms devoted to experiments on animals. Partly for this reason the Harvard laboratory suffers from lack of space; a new one will be built in the near future. Most laboratories have a departmental library, or at least a seminary in which the students can read or meet for discussion. Practically all have a workshop and employ a trained mechanic who is able to turn out even complicated and expensive apparatus.

The methods of conducting experimental work naturally differ in the various laboratories. At Harvard and Columbia lectures are given in connection with the experiments, but at other universities lectures and practical work are wholly independent. At Yale, Harvard, Princeton, and Cornell students work together in pairs, each member of a pair serving alternately as subject and as experimenter. At Pennsylvania

students work together in groups of three, the third recording the results obtained by the two others. Stress is laid in most laboratories on the careful keeping of note-books. Many of those in Cornell are models of neatness and diligence; there they are inspected, marked, and initialled monthly by the assistants. At Princeton the times are so arranged that only a single pair of students is working in the laboratory at any one hour; they thus secure the undivided attention of the instructor. At Harvard and Pennsylvania the entire class is engaged upon the same kind of experiment at any one time; the Pennsylvania students are each provided with lockers containing the simpler apparatus they are likely to use. At Yale and Cornell, on the other hand, students are engaged simultaneously at different experiments; one pair, for instance, is working on colour-vision, another on reaction times, another on tactile sensibility, and so on. Save at Cornell, the students are each taken through all the laboratory experiments commonly described in the text-books. But at Cornell it is held sufficient for the student to devote himself to the investigation of a single sense, working over perhaps fifteen experiments therein, and then to proceed to one or two experiments on the expression of the affective states, thence to some of the experiments in attention and reaction, and so on, whereby he acquires a practical experience, less extensive but probably more thorough than that usually obtained. He works four and a half months in qualitative and four and a half months in quantitative experimental work during his third year. His fourth year is devoted to some special problem, and he writes an essay upon his results.

If, having taken his B.A. degree, the graduate determines to pursue his studies further, he enters the post-graduate school in order to proceed to his doctor's degree. After two or three years' post-graduate study he may present himself for examination in a chosen division, *e. g.*, philosophy; and within the division he must name some special field of study, *e. g.*, psychology, in which he is liable to minute examination, and must offer a thesis showing evidence of independent research. In psychology, as in all subjects, advanced lectures are delivered to suit his requirements. At Cornell, during his first year of post-graduate study the student does not start any special research work; he reads and roams about the laboratory,

observing what his senior fellow-students are doing. A very large proportion of post-graduate students at Yale and Harvard consists of graduates from smaller universities. At Harvard I found no less than sixteen students engaged in the psychological laboratory at original work for their Ph.D. degree. They attended there at fixed times in the mornings only, working in pairs alternately as subject and as experimenter. Weekly seminary meetings are held at Harvard, Yale, and Clark for post-graduate students. At Harvard three papers are read at each evening meeting by the students, and are discussed by themselves and their professor. At the Yale seminaries a post-graduate student presents a paper weekly, dealing with the system of some well-known mental philosopher. At Clark the students meet each week at the professor's house to narrate and to criticise their progress in research work.

A very large proportion of thesis work written for the Ph.D. degree in psychology sees light in the pages of American psychological journals. In many instances this must turn out to be the one piece of original work such men have performed in their lives. They drift away in various directions. The best are chosen by their professors to be laboratory instructors for a year or more. Thence they go to become assistant professors in other universities, or depart earlier to teach educational psychology in the State normal schools or in other teachers' training colleges. Mainly through lack of leisure, they put forth little in the way of further and maturer research. There is a strong tendency, too, for the most eminent psychologists in America to turn to editorial or literary work, or to deal with purely philosophical, ethical, or religious problems.

But apart from such drawbacks, which are the result rather of American ways of life and character than of deficient interest or training, I have said enough, I hope, to show what a living subject of education psychology is in the United States. It is becoming recognised there that a man of culture should know something not only of the works but also of the working of the human mind. Psychology in the United States is not a subject of the philosophical few, as it is in our country. If it pays the penalty for, it also reaps the advantage of its position. I have shown you what numbers of undergraduate

students acquire a notion, however dim and imperfect, of the range and importance of psychology, so that if ever they become successful business men, as many of them do, they are prepared to lend it financial assistance in later life. Future medical students take up psychology during their academic career, and turn their knowledge of it to account when they come to deal with the problems of insanity. Zoologists pass from their museums to study it, and return to work out the psychology of animal life. Teachers obtain a useful smattering of it, sufficient to interest and improve them in their arduous career; at Pennsylvania, for example, they have the opportunity of attending a pedagogical clinic at which children with various mental disorders are brought before their notice, so that they may recognise them hereafter.

Surely, then, I may forbear to indicate at further length what a lesson America offers us, and what an example it has shown us in the organised teaching of a subject the welfare of which we have so much at heart.

(¹) A paper read at a meeting of the Psychological Society held at Cambridge, July 25th, 1903. It has been published in *Nature*.

That Epilepsy cannot be caused by Toxæmic Conditions.

By W. HAMILTON HALL, L.R.C.P.Lond., M.R.C.S.Eng.

FROM time to time one meets with the opinion, or with expressions and general phrases indicating the unavowed opinion, that "idiopathic" epilepsy results from a toxæmic state,—that is to say, that epilepsy the disease is caused by poisons circulating in the blood; or less positively that epilepsy the paroxysm is determined, the attack precipitated, by the transient presence in the blood of such poisons; and in both cases the unexpressed idea seems to be that these poisons get there, in the manner of other auto-intoxicants, by reason of the inefficient performance of the digestive function in some respect.

A most learned and brilliant worker in another field has wittily expressed his experience that "sometimes . . . a theory . . . needs only to be clearly stated in order to break

down by its own weight,"⁽¹⁾ and that this expresses true wisdom is unquestionable, though it may not be practicable to apply it effectively in this case of the causation of epilepsy. But baldness of statement has always at least the merit of exposing the true nature of the proposition one is invited to accept; and what is this toxæmic proposition, in fact? We know of great numbers of epileptics who are, for a certainty, fed with the utmost care, upon diets carefully thought out, by physicians whose principal object in prescribing such diets is unquestionably the avoidance of dyspeptic troubles, inasmuch as that is the only conceivable object they could have. If they should say they desire to build up the patient's strength, if they should say they desire that the diet may obviate the use of purgatives and clysters, if they should say that their aim is to modify the incidence or the quality of the nocturnal or matutinal attacks,—it all amounts to the same thing: they desire to facilitate in every way, and as far as may be by perfectly natural means, the performance of the whole digestive act.

That is very good practice undoubtedly, but what effect does it produce upon the epilepsy? Does it prevent fits? Does it modify to any extent the incidence of the fits, the number, the time, the severity, the variability in severity? Does it have any recognisable influence at all upon the fits, as distinguished from the patient? Hardly any, perhaps, if one looks only for amelioration; but much, one quite believes, if one looks chiefly at the contingencies reasonably likely to attend the neglect of such obvious precautions. The plain conclusion would appear to be that in these well-cared-for patients the toxæmia is not a result arising immediately from the ingesta. That conclusion might, indeed, have been attained off-hand, by consideration that the patient often is known to have had fits while still at the breast, though others suckled by the same mother are not so affected. If we cannot quite go the length of believing that the maternal breast is sometimes for months together a source of toxic or potentially toxic food, sometimes not, then we need not greatly boggle over rejecting the proposition that a carefully designed diet, which will provide most children with perfectly healthy food, may nevertheless provide one of the number round the table with the noxious factor.

But if it cannot be maintained that poison enters with the food, it may nevertheless be manufactured out of the food,

granting that to be in itself innocent. Thus to express the opinion, however, really begs the question, for it predicates of the epileptic that he has possessed himself of the habit of producing his toxins, which caused his epilepsy, from his nutriment, which is an absurd statement. Some of the latest assertions on the full nature of the digestive process are really alarming in their complexity, but stated in its crudest terms this proposition is that the epileptic is enabled to get out of his food something which the non-epileptic cannot get, and to make himself an epileptic with it. No vicious circle argument can be brought to bear, since it is plain experience that some are epileptics from the first, wherever that may be taken, and it is impossible to imagine a food-derived toxin which can make one person an epileptic but not another, other things being equal ; it would be as rational to imagine a condition in which twice two is sometimes four, sometimes not. Merely for the sake of argument granting the toxin to be a demonstrated fact, the next fact that it makes an epileptic of one but not of another demonstrates a personal difference, that the other things are not equal ; for the only alternative is that this toxin can be produced by all, from any food ; therefore we are all epileptics potentially, whether we know it or not, and the apparent freedom of the healthy is mere neglect of opportunity.

If, then, some patients are in actual fact epileptic and dyspeptic, as a great many of course are, these two conditions cannot truly be regarded in any way as cause and effect, mediately or immediately, until it is shown that the dyspeptic condition, the toxin-producing condition, is actually a precedent and not a consequent condition ; and still taking that toxin for a demonstrated fact, it has yet to be shown that the toxin stands to the disease in a causal relation ; alternatively that the toxin stands to the paroxysm in a causal relation. That this has never been attempted is but natural, since the toxin itself has not as yet been discovered ; it is as mythical as the spiritual cause of the medium's vagaries. Not to be unfair, the proposition may be stated thus :—A toxin, not yet isolated, may be the cause of epileptic conditions. Its action is presumably effectuated through the agency of the circulation, and its origin may possibly be in some product of undigested food. If that can be allowed to pass for a rational imagina-

tion, what follows? The results of indigestion are reasonably common, they are absolutely the commonest manifestation of ill-health; therefore the opportunities for the production of this toxin are on every hand. Is epilepsy equally common, as a mere matter of counting noses? Do any vast majority, or any constant proportion, of dyspeptics manifest epilepsy sooner or later? It is difficult to formulate a proposition more at variance with the observed facts. On the other hand, do all epileptics suffer from dyspepsia in the first place? That certainly is not so, for some epileptics, a minority no doubt, are entirely free. Are we, then, to suppose that these get their toxin by an easier process, without the intermediate stage of gastric putrefaction? These, then, are the patients who have the most fatal facility for auto-intoxication—the patients of the worst and most hopeless type? But in fact the epileptic who is not dyspeptic is the happy exception, the comparatively fortunate of his class, the case in which the chances of relative improvement, or of delayed deterioration, are most hopeful. To state the matter shortly, no one has yet shown any good grounds whatever for believing either in the existence of this toxin, or in an origin for this toxin, or in the causal nature of any casual toxin which may perchance exist. The whole idea is, in fact, a putting of the cart before the horse.

When we regard epilepsy from a general point of view, free of any beliefs or theories or imaginations, rejecting all ideas or dogmas which are plainly inconsequent, and looking simply at the facts before us, what do we see? Well, we see a patient with abnormal symptoms. These symptoms are fairly constant in type, but protean in form. Searching for a general feature of these protean details, at last we find mainly a condition of over-activity, of preposterously exaggerated function. That is seen in many different manifestations. Some patient who has usually, perhaps, a slight degree of salivation, during a fit has such excessive action of the same function that the saliva may be seen streaming as clear fluid from the mouth. In like manner the normal tear solution is seen during the fit as profuse lachrymation. Both conditions are sometimes seen in paroxysmal degree, when no general convulsions actually supervene. Similarly enuresis is often present; and, moreover, the same patient will show different manifestations of this kind at different times. These simple instances are selected because

here is the result of exaggerated function manifest, capable of being estimated in the increased output. It is not more difficult to recognise a like extravagance of muscular action. The very interesting variability of the unconscious pupil, oscillating, under the influence of involuntary muscular fibres, quite slowly between comparative constriction and wide dilatation, can be seen going on throughout the course of most epileptic fits ; as a matter of fact this is very rarely, if ever, absent, and a useful little point is that this symptom cannot be imitated by the malingerer. Turning to slightly larger movements, there is the nystagmus which may precede or accompany the general convulsions, and other illustrations will readily occur.

When we come to consider coarse movements in this light we are getting near to the actual conditions of "convulsion" as that word is commonly applied. The same exaggeration of normal function is plainly recognisable. We may first regard a case which admits of ample time for leisurely consideration. Most will admit that the mere incidence of the body-weight upon the feet provides sufficient stimulus to induce "automatic" walking. Space does not serve to argue out the precise mode in which these semi-reflex acts are effectuated, but this particular reflex is not commonly disputed ; whatever may be its actual nature, it is a normal condition of the healthy. But the epileptic frequently shows the next stage, and on being started to walk overdoes the action, adopts the spastic gait, even to the extent of walking entirely on his phalanges, as a horse does normally. That shows distinct points of resemblance with the exaggeration of the normal tone of those muscles concerned in maintaining the erect posture, into the tonic extension movement which ushers in the convulsive movements of the ordinary fit. As a minor point, one of the very commonest symptoms among the defective, who are so frequently also epileptic, is the habitual over-extension of the digital phalanges on the metacarpus. All this misdirected energy is to be seen with a frequency so great as to be virtually constant, and every observer can furnish other examples, since epileptics of every shade and type have some or other form of it.

The stomach is an organ which frequently displays such over-excitability, as might be supposed from its relative importance in the economy ; and accordingly the patient with the

spastic gait may now and then also illustrate the habit of food-regurgitation. It is interesting to notice that whenever any such symptom is rather more marked than ordinary, the incidence of general fits may be anticipated; and also that when one patient displays two or several of these manifestations, a plurality may be worse than average together; or his whole attention, so to speak, may be concentrated on one only. In the matter of regurgitating the food it will be found that, so far as diet is concerned, changes from the present suitable diet to another equally suitable will have no sort of effect in altering this condition, which is not to say that indiscretions of diet might not make it much worse, though that at times would appear an impossibility. The heart is another organ of which the functional activity is easily observed. Many epileptics show great changes in this respect, and some perfectly intelligent epileptics, perhaps a small matter, refer the aura to cardiac sensations. In this connection it cannot be without significance that the "fit" may at times take the form only of a sudden, often alarming rise in the temperature; from normal to 107° , for example, has been observed. It is impossible to overlook that the vast majority of epileptics, both in and preceding, and also to all appearances independently of fits, show marked disturbances of the vaso-motor apparatus. Here is perverted energy visible in the areas of pallor and blush. The commonly received explanations of the turgid to livid countenance during a fit may be questioned for their absolute accuracy; but if their general accuracy be granted they fail to explain those fits in which this extreme congestion of the facial, and presumably also the cerebral circulation, is entirely absent, although the struggles are equally violent. It is easy to notice that this congested circulation of the face and brain cannot be entirely mechanical, but must be largely of a process common also to emotional states. The blush is distinctly emotional, and if one observes a child, especially a fair child, in a violent passion of screaming, one can see precisely the same turgid countenance, the colour often sharply marked off at the supra-orbital ridge and just above the zygoma, unembarrassed by any doubts that here is superfluous and misdirected energy obvious.

Keeping, however, to the main proposition, the toxin-production, we cannot call that a normal function, nor an exaggeration of a normal function, of the stomach. We can, however, after a

fashion, see a perversion of the stomach's true office if we look for it. The patient who at one time, in one fit that is, pours out tears literally by the drachm, at another time may very possibly furnish a salivary flow measurable in ounces. When we see such plain evidence of profusion in the flow of one secretion assigned to the digestive function, it is not unreasonable to assume that a like profusion may occur in another,—for example, in the proper gastric secretion. No one who has seen an insane or a more or less idiotic epileptic vomiting fluid, apparently of his own mere motion, literally by pints, and to the extent of losing body-weight by pounds, several pounds in two or three days,⁽²⁾ can have any doubt that such action may occur ; and that similar discharges in less degree are frequent is certain, therefore that they occur in a degree not admitting of ready observation is practically certain, and in this lesser degree they may be very frequent. That, however, would amount to perversion, gross excess of normal function ; and the stomach which has thus, so to speak, been squandering its resources, may very possibly be unable to resume its normal function immediately. A period of "dyspepsia" would very probably follow, entirely independent of any article of diet ; and the evidence that something of the kind does actually happen arises, or may be plausibly inferred, from the observation that artificial feeding with self-digesting food does shorten the period of recovery after such a phase of extreme over-action. The extent, of course, to which a few days' peptonised feeding has facilitated repair must be in great measure a matter of personal judgment ; but by giving ample attention to the scales the judgment is greatly fortified, and where weight rapidly lost has been almost as rapidly replaced we may be very sure that something out of the ordinary has been achieved. It might be somewhat fanciful to compare the condition of a stomach which can only inferentially be called exhausted, with the muscular paresis which is called post-epileptic paralysis ; but one may be permitted to observe that the latter condition has not been very satisfactorily explained, and "paralysis" of an evanescent nature must be of the nature of exhaustion in some way, either functional or central.

But to say that the stomach, misdirected to these extreme degrees, is to be held guilty of producing the cause of all the trouble is most unfair, since the calf muscles or the iris might

with equal justice be accused of the mischief. They behave with the same functional irrationality, and the stomach does nothing worse than we see the lachrymal and salivary glands doing. Exhaustion for their true office has not, indeed, been proved of these organs, but it may be remarked that inexplicable conjunctivitis is not rare among epileptics, and rapidly disappears without treatment. There is little doubt that the theory of "peripheral irritation" has much slovenly thinking to answer for. The teething infant has a fit. Peripheral irritation in the gums. Or the little child has a fit, and ascarides. Clearly peripheral irritation. But some of those who pass through dentition, and even endure ascarides, escape the fits unquestionably. Or perhaps a long prepuce. Plainly still peripheral irritation, therefore off with it. But does he not continue to have fits nevertheless? Undoubtedly he does, very frequently. And where is peripheral irritation in the matter of pediculi? Shall we regard the irritation of dentition, and disregard that of the carious tooth? or ignore the renal calculus, while reviling the frequent nematode? Not very logically, perhaps, so long as renal disturbances are closely associated with rigor, which in turn is in infancy expressed in the form of convulsion. Very possibly the infant is seldom troubled with renal calculus, but equally epilepsy often does not develop till adolescence, or even middle life.

Shall we further disregard the strictly comparable case of traumatic epilepsy? Why has this sufferer no need for a hæmic toxin? We know that a cranial injury is sufficient to serve his turn; we have the clearest evidence that irritation of the meninges and cerebral surface is a prime factor in the cause of his condition, not merely by the traumatic sequence, but demonstrated by the surgical cure of many cases. Though the "idiopathic" variety is obviously something different, it is absurd to suppose it to differ *toto cælo*, so long as we must acknowledge that it is also obviously something similar. It must be an assumption the most natural, even if eventually shown to be erroneous, that the central instability is the constant, the peripheral irritation the accident—very frequently, no doubt, merely the coincident. So of the symptoms. The excessive over-action is the constant; the form in which it is manifested is most uncertain and most variable, whether it be pure matter of chance what the form is in fact or not. The

only thing one can predicate of the epileptic is that he is almost certain to exhibit this extravagance in some form or another ; even the slightest cases of epilepsia mitior may be found to illustrate it in some way, on careful search.

We are reduced, then, to the admission that central instability can be caused by a toxin of unknown nature, and one whereof the manifestations are so variable that it might be several. To put it shortly, however specious the theory of auto-intoxication, the blessed word toxæmia does not explain anything, and, indeed, has no real meaning in this connection. An elementary step towards knowing something of this disease is to be quite clear what we do not know ; and the next step is to discriminate closely between what we do know and what we only think we know. We know that plenty of exercise in coarse movements, such as walking and general outdoor labour, has a beneficial effect, possibly by reason of directing sufficient energy to proper ends. We know that the less severely affected have their attacks mainly at night, when, in fact, there is practically no demand for energy in beneficent channels. We know that emotional states, which as a whole may be called in this connection maleficent, are extremely likely to induce untoward manifestations—fits, temper, dyspeptic derangements,—and we know a number of equally simple everyday facts, since we see them in every epileptic. And we are asked to explain all these notorious matters by the assertion of the presence, or the ancient presence, of a toxin circulating in the blood. It would be hardly less reasonable to explain a fall in the funds by the circulation of spurious money ; not necessarily now, any time. That that has existed can be really proved.

(¹) *Archæologia*, vol. lviii, p. 322.—(²) From 55 lbs. 2 oz. to 48 lbs. 4 oz. within a week, to quote a concrete instance, *vis.*, a loss of one eighth of the total weight.

Clinical Notes and Cases.

Twelve Cases of "Korsakow's Disease" in Women. By
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FIFTEEN years ago the late Professor Korsakow described an assemblage of symptoms met with most frequently amongst

chronic alcoholics. He claimed that they represented a distinct disease, which he termed polyneuritic psychosis, and later cerebropathia psychica toxæmica. The cardinal features of this affection, according to him, were, besides the polyneuritis, amnesia and pseudo-reminiscence. We in England, perhaps wisely, are slow to accept new diseases; but as now a large amount of literature has accumulated around "Korsakow's disease" from physicians in all parts of Europe, it may be of interest to give an account of twelve cases among women which I have met with presenting the symptoms of this affection.

Whether we regard "Korsakow's disease" as an entity, or merely as a syndrome occurring in divers affections, there is no doubt that the associated symptoms he pointed out are met with in a comparatively large number of cases of chronic alcoholic insanity; and the mere fact that certain symptoms cohere in certain cases lends these cases an additional interest. But, indeed, the recognition of such a coherence is a real gain to our stock of knowledge, which after all is but a classification and comparison of phenomena.

Before stating my cases I will mention very briefly some of the opinions of Continental writers regarding this affection, and for this purpose I shall make large use of a paper by S. Soukhanoff and A. Boutenko, which appeared in the *Journal of Mental Pathology* (vol. iv). Appended to this communication was a complete bibliography giving a hundred and ten references, only three from English sources.

Although alcohol is accountable for nearly three quarters of the cases, it also follows after typhoid fever, childbirth, jaundice, pyæmia, arsenical and, perhaps, lead poisoning. One writer, however (Oppenheim), could find no cases with the characteristic psychic disturbances in others than alcoholics.

Many authorities do not consider that polyneuritis is a necessary accompaniment of the special psychic disturbances (Babinski, Gudden, Jolly, Bonhoffer, etc.). It is very generally looked upon as a form of mental confusion of toxic origin. Some consider the speech as characteristic (Chancelay). A common feature noted by many is the happy disposition and feeling of self-satisfaction displayed by the patients. Some (Wernicke, Chancelay, etc.) consider the prognosis unfavourable, others (Rogues and Fursac) as favourable; Tiling says the non-alcoholic cases are favourable, but not the alcoholic,

which always leave some mental defect. The intactness of the intellect and judgment is insisted on by this writer and others. Chotzen says that women are more susceptible than men, and gives the recovery rate as 1 in 38 in both sexes. Some consider delirium tremens as a slight form of the affection (S. J. Cole also discusses this point); others consider that it may be an exciting cause. Soukhanoff and Boutenko analyse the total number (192) of cases collected, and find that 112 occur in men and 80 in women, and that nearly three quarters are of alcoholic origin.

There is not much difference in the age of onset in either sex; the greater number in both men and women occur between thirty-one and fifty years of age. All the cases in women have presented marked multiple neuritis, and in about 9 *per cent.* only it was absent from the male cases. In men, in about half the cases some psychic defect persists; death is frequent and complete recovery rare (2 *per cent.*). In women, 14 out of 76 recovered, 6 partly recovered, 20 were left with psychic defects, 5 became demented, and 21 died. Eleven out of the 14 recoveries were of alcoholic nature.

No. 1.—E. A—, æt. 49, married, said to have been sober until nine months ago. On admission she was quite unable to walk, her knee-jerks were absent, her pupils reacted normally to light and on accommodation. Her tongue was steady. She was very confused and had no idea of the lapse of time, and two days after admission thought she had only been here two hours. Was very badly orientated, and said she was “near the cemetery in Grove Road, close to your shop.” In a little over three weeks’ time she could walk alone, but waddled with legs apart and could not turn without support. Romberg’s sign was present. She had a fair sense of the position of her limbs in space, and could localise with her finger fairly accurately the places where I pricked or touched her. Her feet and fingers were swollen and very painful on pressure, and she said they felt numb. She was restless and fidgety; thought she had known me a long time, and called me Dr. Todd; her disposition was very cheerful. After the lapse of three months she became noisy and excited, sat up in bed and rocked herself to and fro, and sobbed; talked in a silly hysterical way, and turning to her nurse exclaimed with emphasis, “Oh, she is a love, she is a love, she is a dear; oh, I could kiss her.” Remained in this condition for two or three days and then gradually improved; her gait became normal and her movements less tremulous; Romberg’s sign disappeared, but her knee-jerks remained absent; her muscle sense, tested by weights and the position of her limbs in space, was normal. There was some blunting of tactile sensibility and some anæsthesia (described a pin-prick as pressure with head of pin); no pain or numbness. She

was discharged as recovered, ten months after admission. Her memory remained defective, both for recent and remote events, though better than when she was admitted.

No. 2.—E. F—, æt. 46; married; no children; previous to admission had been in bed for two months, said to be paraplegic. The certificate stated that she imagined she had a baby in bed with her, and that she had been to Yarmouth that morning and had only been in bed half an hour and had just finished her household work. I quote these facts in full as they are so characteristic of the disorder, and as illustrations of confabulation and pseudo-reminiscence. On admission she was unable to stand, but could lift her feet from the bed and exert considerable pressure against my hand with them. She was aware when I touched them with my finger, and could tell me the number of times I did so; and with her finger could localise correctly the stimulated part. When she was pricked so as to draw blood she felt no pain, but only the pressure. This condition existed from her thighs to her feet. In the arms her sensitiveness to pain was much blunted, but not entirely absent, and she localised here also well. In the face her sensitiveness appeared normal. Her knee-jerks and plantar reflexes were absent; her pupils equal: they reacted slightly to both consensual and direct light, and well on accommodation. She lay placidly in bed, and talked in a drowsy way; did what I told her to. Ejaculated short phrases with no relevancy to my questions; e. g., "I haven't put it near me . . . Another miscarriage with myself . . . I'm reflecting to you . . . I picked up this hand" (lifted up her own hand) "and pointed to you" (did so). "Now this leg is moving," etc. She did not know the day or how long she had been here. She was dirty in habits. Ten days after admission she was able to walk in an unsteady fashion. Romberg's sign was present; she complained of "rheumatics" in hands and feet, and that her hands felt "so big and numbified," and also of a feeling of "pins and needles." These sensations were less felt in her feet. She had no idea how long she had been here, and was always referring to imaginary journeys to the pawn-shop and public-house. Exhibited a characteristic feeling of self-satisfaction, and laughed at nothing. Twenty months after admission she was neat and industrious; her pupils were equal, and reacted normally to light and on accommodation. Her gait was normal, but her knee-jerks were still absent. Her sensitiveness to tactile and painful impressions appeared normal. She still exhibited amnesia and pseudo-reminiscence. She was discharged as recovered six years after admission with her memory still impaired.

No. 3.—E. E—, æt. 45, married, a heavy drinker for years. The certificate stated that she raved about her sins, imagined she saw animals of all kinds, refused her food, and was very excited. On admission her knee-jerks and plantar reflexes were well marked. She had apparently no use in her legs and could not stand. The right pupil was larger than the left. She was emotional and irritable, and returned generally irrelevant replies, but after a few days was able to converse better, and it was then found out that she had no idea where

she was, and thought she had been here six months. Imagined that she was taken out at night to sleep in a room below, whereas she was not moved, and was on the ground-floor. Recognised strangers as her personal friends. Had visual hallucinations of animals. She was able to get up after a fortnight and walk with a little support, and at the end of two months her gait was normal and she was discharged as recovered. No mention was made in the case-book as to the condition of her memory when she left here.

No. 4.—M. P—, æt. 43, married, was admitted in an acutely maniacal condition, noisy, abusive, and obscene; her knee-jerks were absent, her pupils equal, and they reacted normally to light and distance. After five days she became drowsy and extremely confused, with very impaired ideas as to the lapse of time. She remained in this somnolent condition for a week, and then began to be more alive to her surroundings. Was able to give her name and the place where she was born, but when she is asked her age replies, "Blowed if I know!" Said she had had five children, including twins. Her knee-jerks remained absent; her plantar reflexes were of the flexor type. Her tongue was deflected slightly to the right; it was free from tremor. She was unable to walk without assistance. Six months after admission she had a seizure of some sort, "lost consciousness and went stone-cold" (information from nurse); her temperature was subnormal, and remained so for six days, when it rose to M. 102°0', E. 102°4', but went down the next day. In the course of a few days she became quite talkative and exhibited characteristic pseudo-reminiscence; e. g., "had been married that morning in the church over there" (pointing). Called the nurses by their wrong names and thought they were old friends of hers. She was in bed and was unable to stand. A year afterwards she was stout and in good condition, able to walk in a somewhat stilted way. She complained of stiffness in her joints; Romberg's sign was absent. Tongue still deflected slightly to the right, and knee-jerks abolished. Looked after herself, had a smiling aspect, and was self-satisfied and jocular. Her memory was still very impaired as to recent events, but she no longer indulged in pseudo-reminiscence, and was able to converse rationally. Three years after admission she was still in good health, neat, cheerful, and placid, and the only serious psychic defect was amnesia. She had no idea of the correct date, and when I made her repeat it after me she almost instantaneously forgot it again. At the present time, two months later than the previous note, her memory has much improved, and is now fairly good for both recent and remote events. Her gait is normal but slow, and she easily gets tired. She complains of cramps and pains in her legs; her knee-jerks are still absent. She is silly and placid, laughs without obvious cause, and gives no trouble.

No. 5.—E. S. B—, æt. 58, married. She was said to have had a "fit" a few months before admission. On admission she could not walk, and when I got her out of bed and stood her up her legs gave way, and she fell down on the floor. Sensitiveness to painful impressions was much blunted from the knees down; elsewhere it appeared normal. Her knee-jerks and plantar reflexes were absent, her pupils equal—they

reacted fairly well both to light and distance. Tongue straight and steady. She had a silly smiling aspect, and gave very erroneous answers. The day after her admission she had no idea how long she had been here. She described herself as thirty, and said she was a widow with three children, the eldest eighteen, and that she was only twelve and a half when she was married. A month after admission she was able to walk, but very unsteadily. Romberg's sign was present; she told me, "As soon as I shut my eyes I feel I must go down." Her knee-jerks were still absent. She was very confused, said she had been here ten years, and had been to the City that morning, and to Spurgeon's Tabernacle. Called me Mr. McDougall. She had a smiling aspect and her speech was clear. She remained in much the same condition till the middle of 1902, when she was removed to a branch establishment. Her legs occasionally gave way under her, she was always cheerful and self-satisfied, and forgot things as soon as she was told them. She still indulged in pseudo-reminiscence.

No. 6.—K. W—, æt. 53, married. The certificate stated that she had no memory, and kept getting out of her bed and looking under it for her baby. On admission her knee-jerks were exaggerated and her plantar reflexes of the flexor type, her gait apparently normal; her pupils were equal and contracted, and either rigid to light and on accommodation, or else reacted very slightly; her tongue was steady and protruded straightly. She was very restless during the first night, and kept bumping her bedstead on the floor. The next day she was quieter but very confused, and did not know what day it was, nor how long she had been here—"about a year," she thought. Described her age as sixteen. Her habits were very defective. She rapidly improved in all respects except as to her memory and habits of confabulation; she stated frequently that she had been to Walthamstow and back in the morning (a distance of over thirty miles). Forgot all about friends who had recently visited her. She was neat and clean, and after ten months was discharged as recovered. No mention was made whether her memory had improved when she left.

No. 7.—E. C—, æt. 53, married. The certificate stated that she was delusive—she was to be burnt alive, and fancied she had a baby in bed with her. On admission she was unable to stand, and lay with knees slightly contracted and "dropt feet." Her sensitiveness to tactile and painful impressions was much blunted from the thighs downward, and also in her arms and back of hands; her tongue was steady and protruded straightly. She remained in bed for two months with amnesia and ideas that boys came into her room and annoyed her. After six months she was able to walk a little, was much less confused, and was discharged as recovered but with impaired memory.

No. 8.—S. W—, æt. 29, married, had been a heavy drinker for years past. On admission she could not stand. There was some hyperæsthesia in her legs and feet; otherwise no decided abnormality of sensation was detected. She lay with her legs extended and with "dropt feet;" her knee-jerks and plantar reflexes were absent; her

pupils were equal and they reacted to light, but with a restricted range; their reaction for accommodation was normal; her tongue was steady and protruded straightly. She had a superficial ulcer on the outer side of her right leg. She was very talkative and pleased with herself. The next day she became excited, and saw rats running all about her room. Was badly orientated and had marked amnesia, and was much given to confabulation and pseudo-reminiscence; *e. g.*, stated that she made journeys to Highgate and elsewhere, and that she had a baby in bed with her. If told the correct date and made to repeat it herself she immediately forgot it again. Diarrhoea and vomiting set in three weeks after her admission, and she died a fortnight later.⁽¹⁾ An autopsy was made ten hours after death. The body was well nourished. There was excess of fluid beneath dura, arachnoid, and in the lateral ventricles, and considerable atrophy of the convolutions at the vertex; otherwise the brain, meninges, and vessels appeared healthy. The right and left cerebral hemispheres (with meninges) weighed 480 grms. each, the cerebellum 115, and the stem 30; total encephalon, 1105 grms. The lungs were free from adhesions; they were congested at the bases, otherwise they appeared healthy. The heart weighed 385 grms.; both it and the aorta were fairly healthy. The liver was mottled and probably fatty, but it was not examined microscopically; it weighed 1535 grms., the spleen 215, and the kidneys 120 and 125; they all appeared normal. Transverse sections of the posterior tibials of both sides stained in osmic acid showed decrease of the myelin rings and increase of interstitial tissue. Longitudinal sections, after hardening in Müller's fluid and treatment with osmic acid, showed breaking up of the myelin coat into drops and small black droplets of recent degeneration. Sections from five or six of the posterior root ganglia were examined after staining with toluidin blue. A very large proportion of their cells were in a state of axonal reaction. One ganglion, examined for the Marchi reaction, showed no degenerative changes in the nerve-fibres. Sections of the spinal cord taken at three levels, *viz.*, cervical enlargement, mid-dorsal, and lumbar enlargement, and stained with toluidin blue, showed only a few cells of the anterior horn in the cervical region in a state of axonal reaction, more in the dorsal, and nearly all in the lumbar. Clarke's column-cells and the scattered cells seen in similar positions in the lumbar and cervical regions were practically all similarly affected. In the cervical region there was only slight recent degeneration in both Goll's and Burdach's column scattered throughout, except quite at the cornu commissural region. The crossed pyramidal tracts were slightly affected. Elsewhere no recent degeneration was noted at this level. In the mid-dorsal region a more marked condition of recent degeneration in the same tracts was observed, and still more marked in the lumbar region; and here some of the anterior nerve roots (intra-caudal) showed recent degeneration. The posterior nerve-roots were unaffected except at their entry into the cord in the lumbar region. The cells of the hypoglossal nucleus and Purkinjé's cells did not show any signs of axonal reaction or other alteration. The paracentral convolutions on both sides were examined. The meninges were unaltered, there was no obvious increase of spider elements in the first layer of the cortex, and

the vascular changes were insignificant. Every Betz cell seen was in a state of axonal reaction, generally in a marked degree (nucleus affected).

No. 9.—M. A—, æt. 39, married, a beer drinker. She was confined to bed for three weeks before coming here. On admission her gait was unsteady, but she did not show Romberg's sign; her knee-jerks were exaggerated, and her plantar reflexes of the flexor type. She had jerky movements of the arms and head, and her legs were tremulous whilst she was speaking. Her tongue was also slightly tremulous; it was protruded straightly. Her pupils were equal and their reactions normal. She was a dull, heavy-eyed, restless woman, wandering aimlessly about. She had marked amnesia and was badly orientated. Forgot things as soon as she was told them. She could hear her children talking to her (hallucination). After being here ten days she became very excited and agitated, appeared frightened, and thought the place was on fire. Her face was flushed and her tongue dry and brown; she showed marked dropping over to the right side. She was apparently quite lost to her surroundings, and kept uttering short disconnected phrases having no bearing on her present circumstances. When she got up, after being ten days in bed, she could only walk in a very unsteady fashion, and had a small superficial sore over the sacrum. She remained so feeble on her legs that it was necessary to keep her in bed for the greater part of her time for another six weeks. And when she was temporarily got up she would try to run about, and fall and hurt herself. She could not turn without stumbling, and had to be supported. She did not show Romberg's sign, her knee-jerks were normal, and her sense of the position of her limbs in space was intact. She laughed or cried at suggestion, but had a sense of humour, and was self-satisfied and very talkative. Amnesia was present to a marked degree, and confabulation. Her speech was somewhat thick. A week later there was an extraordinary improvement in both her bodily and mental symptoms; her gait had become normal, and her memory for both recent and remote events very fair; she was neat in her appearance, bright and rational in conversation, and so she remains awaiting her discharge.

No. 10.—C. N—, æt. 39, married. Patient was stated to be very susceptible to alcohol. Mental disturbances and loss of power in her legs have been gradually coming on for eighteen months. She was previously an active woman. On admission she was unable to stand, and there was apparently some anæsthesia and analgesia in her legs below the knees. She described a prick as a blunt impression, and localised the spot with her finger very incorrectly. Elsewhere there was no marked abnormality of sensation noted. Her knee-jerks were absent, and her plantar reflexes of the flexor type. In the class of patients under consideration the testing of sensation is a very unsatisfactory matter; their answers are often unreliable and their power of attention very faulty. This woman, when tested a month later, had apparently some hyperæsthesia in her legs, and screamed when very slightly pricked, but when her attention was attracted from the examination she paid no heed to sharp pricks. Her right pupil was the larger, and

they reacted normally; her tongue steady and protruded straightly. She was very loquacious and emotional, and although generally jocular and well pleased with herself, could easily be made to weep by suggestion. She had marked amnesia with almost instantaneous forgetfulness, and no idea of the lapse of time. Her orientation was very defective, and she imagined that she was at Southend, and that she had come here for a seaside holiday. She had actually been to Southend for some time previous to her admission here. A month later she was still in bed, cheerful and garrulous, and fabricated all manner of shifting tales; one minute said her husband and children were in bed with her, and the next declared they were all dead. She would point to her knee or a bundle of bedclothes and say it was her baby. A month later she had improved very much mentally, but was still unable to walk, and complained of pricking sensations in her feet and numbness in her fingers; her knee-jerks were still absent. Her memory is now very fair for both recent and remote events; she no longer indulges in confabulation or pseudo-reminiscence—in fact, she converses rationally. In this condition she remains at the present time, with no power in her legs.

No. 11.—E. H—, æt. 35, married. No history of alcoholic indulgence could actually be obtained in her case. The certificate stated that she talked of going out shopping whereas she had not been out of bed. On admission she was unable to stand, could not lift her feet off the bed, and could only push against my hand with slight force. There was some hyperæsthesia in the legs. Knee-jerks and plantar reflexes were absent. Her pupils were equal and their reaction normal. Her tongue was steady and protruded straightly. Her teeth were of Hutchinson's type. She talked in a husky voice, and was very confused and badly orientated. Said she had been here a fortnight and that she was in Cardiff. At the end of four months was just able to walk without support, and Romberg's sign was present; her knee-jerks remained absent. After nearly three years she was discharged as recovered, but her memory remained very defective. In disposition she was quiet and placid.

No. 12.—E. S—, æt. 40, married. No history of alcoholism positively ascertained, but highly probable. On admission she was unable to walk, and lay in bed with "dropt feet." There was no appreciable alteration in her sensitiveness to tactile and painful impression, and she localised fairly well (tested in legs, arms, and face). Her knee-jerks and plantar reflexes were absent. The right pupil was the larger; they both reacted to accommodation, but the left seemed rigid to light and the right reacted very slightly (direct and consensual). Her tongue was steady and straight, and her speech clear. She was restless, jocular, and emotional; sang snatches of topical songs. She could answer questions to the point, but quickly wandered to irrelevant subjects. The following is a specimen of her chatter:—"I love you, Bill; will you have me for your wife? . . . I shall turn over, I'm tired. . . . No, I wouldn't, darling. . . . Yes, I wish you would. . . . You can leave me now for a little time." She continued in good

spirits and very garrulous, laughed at nothing, and was often noisy ; said she had seven thousand a year. She was badly orientated, and with marked amnesia. When tested after the lapse of three months she had apparently analgesia in arms and legs, and went on chattering quite unconcernedly when pricked so as to draw blood, but would casually mention that I was pricking her. Her habits were very dirty. Seventeen months after admission she could walk, but with a waddling motion, and there was no Romberg's sign. Her knee-jerks remained absent. Her right pupil was the larger ; they both reacted slightly to light (direct and consensual) and fairly on accommodation. She was fat, lazy, and impudent, collected rubbish, and was untidy ; her amnesia was still present. She called me "father" and "uncle," and when questioned as to how long she had been here, replied, "Bothered if I know—about a week ;" and when asked to name the day, said, "Blessed if I know—day after yesterday." She remained here over three years in much the same condition, and was then removed to another asylum, where she died a year later of colitis.

The preceding twelve cases, inasmuch as they all present the cardinal features insisted on by Korsakow and others, *viz.*, amnesia, disorientation, pseudo-reminiscence, and confabulation, may without much question be taken as specimens of "Korsakow's disease." Certainly in ten, and probably in all, peripheral neuritis was present ; the existence of exaggerated knee-jerks in some of the cases does not forbid this assumption. Some time ago I examined the posterior tibial nerves in a woman who died after a short residence here with symptoms of peripheral neuritis but with very exaggerated knee-jerks, and found very marked degeneration present. Over-indulgence in alcohol was ascertained in ten, and was highly probable in the other two.

There did not appear to be anything characteristic in the speech ; in two it is described as "thick," in one "drowsy," and in the others it was normal. As to the pupils, the right was the larger in three cases ; in six they reacted normally to light and distance ; in one the range to light reaction was restricted ; in one they reacted slightly to light ; in three they were described on admission as of the Argyll-Robertson type ; but in all these there may have been a very slight movement to light, and in one the reaction improved, so that when she left they reacted decidedly but slightly to light ; in one the reactions were not mentioned.

Jolly, Bonhoffer, Sorey, and Cole look upon Korsakow's disease and delirium tremens as very closely allied ; and Cole

points out how in cases of marked neuritis there is, in addition to the confusion, a delirious condition with marked tremor and jactitation, and often characteristic visual hallucinations (animals), and with often a distinct element of fright or dread. Others, again, regard delirium tremens as an exciting cause of Korsakow's disease.

It will be observed that four of my cases partook largely at one period of their course of delirium tremens (Nos. 3, 4, 8, and 9). Nos. 3, 4, and 8 were delirious at first, and 3 and 8 had typical visual hallucinations (rats and other animals). No. 9 developed the delirious symptoms ten days after admission.

Course.—Seven recovered sufficiently to be discharged, but the memory remained seriously impaired in four ; in two no mention of its condition is made at the time of discharge, and in one it regained its normal state. Three of the cases remain, and in all probability one of these will ultimately recover with no very obvious impairment of her memory. Two died, one after only a month's residence and the other after four years.

Pathological anatomy.—A microscopical examination of the nerve tissues has been made by several Continental observers, but I have not had access to their records. Cole mentions that he can find no record of any case in which the cord was examined by Marchi's method in which it is stated that the posterior columns were free from degeneration. Soukhanoff and Boutenko make very slight reference to the pathological findings. In a case of Sorey's they mention that, besides the degeneration of the peripheral nerves, the cerebral cells were markedly impaired, but they do not say in what manner ; and in a case of Siefert's they state that the most marked changes in the brain were located in the central convolutions. Cole gives a full report of two cases in both of which the pathological findings were similar, and they agree entirely with those of No. 8.

The question as to whether we are to look upon Korsakow's description as applying to a distinct disease or merely to a syndrome will largely depend on our connotation of the term disease. An ideal definition of disease would necessitate our insisting on the presence of certain symptoms, following a specific cause and characterised by a definite pathology. We cannot with the evidence at our disposal say that "Korsakow's

disease" fulfils all these requirements; but neither do many other fully recognised diseases.

It is well known that the injurious effect of alcohol on the organism is of the most varied nature. Sometimes it plays havoc chiefly with the hepatic functions, at others with the renal, and again at others with the nervous. A form of insanity may ensue from the renal disturbance which has distinct features from that which is due directly to the toxic action of the alcohol on the nervous system. Apparently, also, even when the nervous system is primarily attacked the symptoms vary according to the part or parts implicated. For reasons which are obscure, sometimes the vascular and supporting tissues of the brain are chiefly affected, at other times the nerve-cells themselves in one or another region, or sometimes it would appear as though the prolongations of the nerve-cells are the parts especially picked out; and the variations in the psychical disturbances will obviously depend upon the respective parts affected.

I am inclined to agree with Jolly that the symptoms we are considering constitute a syndrome, and are *one* of the manifestations of the action of alcohol and other toxins on the nervous system; that they are the expression of a neuritis affecting different portions of this system at different times. I believe that the specific action of these toxins is on the nerve-fibres, and not directly on the nerve-cell. If the peripheral fibres are implicated, then we get the manifestations of peripheral neuritis; sometimes these structures are not seriously affected, and the toxic action expends itself chiefly on the prolongations of the cortical cells which pass down the cord in the pyramidal tract, or, again, on those which pass up the cord in the posterior columns, in either of which cases we have to deal with a central neuritis. Probably in all cases there is more or less grave implication of the association nerve-fibres, especially those of the tangential system.

The most usual form of nerve-cell change met with is one that can adequately be accounted for without suggesting any direct toxic action on the cell bodies. It is the form known as *réaction à distance*, or axonal reaction. Experiments show conclusively that it can be produced by severance of axons from their cells, or by influences which injuriously affect the axons (*e. g.*, hæmorrhage); and in the condition described by

Korsakow we have, so far as I know, invariably the necessary factors for setting up this change. But there is also another factor present which will supplement and assist the primary action of the disordered motor axons on their cells. We have considerable evidence to show that deprivation of those normal stimuli which pass to the efferent cells (stimuli, that is, proceeding from afferent or sensory cells, and impinging on motor cells) is also capable of setting up this form of change; and in every case, so far, where a microscopical examination of the cord has been made, very marked evidence of degeneration has been found in the posterior columns.

As regards the genesis of the peculiar psychic troubles, whilst the serious interference with cortical association fibres, especially of the tangential system, enables us to form some conception as to why the memory and the time and space ideas should be so seriously interfered with, and account for the confusional nature of the insanity, it seems to me also possible in the cases where there is wide-spread polyneuritis that this factor also to some extent assists in fostering the peculiar mental troubles.

Consciousness depends upon the integrity of the periphery; more or less interference with the nervous currents passing from the periphery to the central nervous system will correspondingly impair consciousness. If we cut off entirely this supply of currents, as, *e.g.*, in chloroform narcosis, consciousness is quickly abolished. A case is on record of a deaf man with practically total anæsthesia of his skin, in whom it was only necessary to close his eyes and he immediately went to sleep, *i.e.*, became unconscious.

Our time and space perceptions depend upon the due appreciation of the sequence or simultaneity of impressions. If we interfere with these to any extent, if they are blunted or perverted, we shall get perversions of time and space ideas; and if the abolition of these impressions is very wide-spread, then not only will the subject be unconscious of his environment, but his ideas of present time and of space will also be annulled. Under these conditions, not receiving an adequate supply of sensations from the periphery, he will draw on the ideas already stored up in his central nervous system, and the result will be pseudo-reminiscence and confabulation. Patients, it will be observed, imagine themselves still to be in the place

where they were before their consciousness was seriously impaired. But although the peripheral trouble may take a share in forming the peculiar nature of the psychic disturbances, this share can only be a supplemental one. There can be no doubt that the confusion of mind is essentially due to disorder of the central nervous system, for when patients have to all intents entirely recovered from their peripheral defects they often still present very marked disturbances psychically, *e. g.*, amnesia and pseudo-reminiscence.

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Serge Soukhanoff and Andre Boutenko, "A Study of Korsakoff's Disease," *Journal of Mental Pathology*, vol. iv, 1903, pp. 1—33.

Sydney J. Cole, "On Changes in the Central Nervous System in the Neuritic Disorders of Chronic Alcoholism," *Brain*, vol. xxv, 1902, pp. 326—363.

(¹) The pathological features of this case are reported more fully in *Brain*, Spring, 1903. It is No. 32 in the article entitled "An Account of the Nerve-cells in Thirty-three Cases of Insanity, etc."

Notes on Two Cases illustrating the Difference between Katatonia and Melancholia Attonita.(¹) By W. R. DAWSON, M.D., Farnham House, Finglas.

ONE of the most interesting points connected with the concept katatonia is its relation to the morbid phenomena included under the older term melancholia attonita. Many modern exponents of the former, especially in Germany, would deny the existence of stuporose melancholia altogether. Yet it seems to me that cases occur conforming to the descriptions of the latter which cannot be included in the category of katatonia without the merest straining of terms. In this connection I think the following two cases are instructive :

Married woman, *æt.* 30, admitted in June, 1902. It was ascertained that her brother had been alcoholic and had committed suicide, and that her sister had met her death in a manner that left no doubt that she had also taken her own life. The patient herself is said to have behaved in a peculiar manner some years before the present attack. She had no family, and sexually was out of health, menstruation being

very profuse. Shortly before the present illness she became connected with one of the more emotional religious sects, and about a year previous to admission she took an inexplicable dislike to one of her clergymen, whom she believed to be preaching at her. A few weeks later, while at the sea-side, she suddenly became acutely insane; but this phase was very transitory, and during the summer of 1901 (in the course of which she underwent an operation) she was depressed and solitary, with fears that her soul was lost. She was at this time in poor physical health. By October she had greatly improved, but she then became nervous, flighty, and restless, lost her sleep, and showed a preference for men's society. On November 3rd she suddenly began knocking on doors, saying that God had called her, and became violently excited. This subsided, but two days later she had another attack in which she bit, kicked, tore, beat her head upon the floor, and the like. This gradually passed off, and she then became perverse and mischievous, and at the same time developed a high opinion of her saintliness. Later still she pretended to be lifeless, passed her motions under her, and had to be tube-fed. I saw her in consultation about this time, and found her unwilling to speak and full of somewhat exalted and mystical religious delusions. She then had a period of mutism for some weeks, but did what she was told. During the spring she was variable and rather depressed, and as she did not seem to be making progress she was sent to Farnham House. She is said to have been suicidally inclined. On admission she was in a state of resistive stupor, lying still and silent, often with her eyes shut, until she was wanted to do anything, when she at once resisted. She was muscularly strong, and showed no physical abnormalities except poor circulation, with somewhat livid skin, rapid pulse, and high arterial pressure, and also a trace of sugar in the urine, which proved only temporary. There was a tendency to constipation. Sleep fairly good. Temperature was slightly subnormal.

On a few occasions during the first nine months after admission she talked a little, but in the main lay silent and quiet with her eyes shut, and resisted violently when anything was done for her, spitting, biting, and striking. She had almost invariably to be tube-fed, had to be washed and dressed, was dirty in her habits frequently, and generally refused to wear any night-linen, though she usually allowed her clothes to remain on in the daytime. In the summer she was subjected to a course of thyroid feeding, but was only partially roused by it, and soon relapsed; and of the other drugs tried the only one which produced any marked effect was trional in 10-gr. doses thrice daily. Under this she always roused and showed improvement, but it soon lost its effect. Almost all through she seemed, so far as could be judged, to retain her perception of what was going on around her; and once (in February last), when frightened by another patient's screaming, she left her room (albeit in a nude state), and was more rational for the rest of the day. In February the menses, which had been in abeyance, reappeared, and she showed some improvement, but in March she relapsed, and, indeed, for a few days the stupor deepened into a condition resembling coma. After this, however, it began to pass away, and some elevation took its place, and in the course of the last three months the stupor has altogether disappeared. The patient is now usually cheerful and slightly

elevated, but is inclined to be touchy and unmanageable, and sometimes loses her temper without any external reason whatever. She is fairly sensible, enjoys visits from her friends, and is beginning to be anxious for her discharge. On the whole, improvement is still progressing, but a certain element of mental weakness is still present, though this may not prove permanent.

We have here a succession of melancholia, mania, and stupor, followed by slight maniacal elevation and mental weakness, in an hereditary neuropath. The whole attack has lasted over two years. There were delusions and probably auditory hallucinations of a religious type both in the melancholic and maniacal periods, and at times also in the stuporose. The latter period was marked by many temporary and incomplete remissions, and the stupor was of a resistive type, with a tendency to negativism. Upon the whole, therefore, the case is a fairly typical example of katatonia, notwithstanding the absence of some symptoms (especially verbigeration and catalepsy) to which great importance is attached by many authorities. On the other hand, the following case, though showing these symptoms, cannot, in my opinion, be so classed :

CASE 2.—The patient, a married woman *æt.* 33, comes of a nervous family, though no neuropathic history has been elicited. She had sustained a severe fall on her head when out riding some fifteen years before, and had frequently suffered from headaches since. Just before the present attack she had had an abscess in one of her fingers. She is said to be naturally rather sulky and obstinate, but very nervous, and a gynaecologist has pronounced her to be sexually ill-developed. For about two years she has been worrying unnecessarily about a certain action on the part of a relative. Early in 1902 she became parsimonious, and then acquired delusions of having no money (even when she had £7 or £8 in her pocket at the time), and grudged necessary expenses. Next she thought that the police wished to arrest her for starving her household, and then began to dislike her husband and to refuse food. On one occasion she is said to have attempted suicide. Various measures, such as change, Weir-Mitchell treatment, etc., were tried without avail, and finally she was sent to Maryville. On admission she was very emaciated, looked much older than her years, and was stuporose and somewhat resistive, but no organic disease could be detected. Her physical condition has considerably improved under treatment, but mentally she remains much the same. Her state varies frequently between a quiet stupor, in which she sits or stands motionless and silent (mutism) and often allows her limbs to remain for a short time in any position in which they are placed (catalepsy), and a state of more or less acute restlessness and resistiveness, in which she looks intensely miserable and is very noisy, repeating one cry for hours in an automatic sort of way (verbigeration). Even in

the latter state, however, there is still a great deal of stupor. She has frequently had to be tube-fed, is wet and dirty in her habits, and at times wakeful at night. Occasionally she recognises her relatives when they come to visit her, and seems glad to see them, but not always. Various forms of special treatment—thyroid feeding, lavage, morphia or opium hypodermically and by the mouth, and latterly over-feeding—have been tried without much apparent result, at least on the mental side.

It will be seen that this case, although showing a sometimes resistive stupor, with mutism, verbigeration, and a tendency to catalepsy at times, differs from the type of katatonia in the absence of marked heredity, of a maniacal stage, of exalted and religious delusions, and of any tendency to real remissions, while there has been marked depression all through. For these reasons (although I admit that further observation is required) it seems to me that this case cannot justly be set down as one of katatonia, but is a genuine instance of melancholia attonita, as distinguished from the former. If this is correct, the case is further interesting as showing that verbigeration may occur in an acute form of melancholia—a fact, if it be one, which has been expressly denied.

(¹) Read at the meeting of the Irish Division at Enniscorthy, July 3rd, 1903.

Notes on the Treatment of Acute Cases. By R. R. LEEPER,
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Dublin.

IF we trouble ourselves to look back and study the treatment of insane persons in olden times, we cannot but be struck by the fact that our forefathers regarded insanity as a disease which needed active treatment, and it generally received such at their hands; and that, however much the weird and sudden outbursts of religious frenzies, sudden seizures, and mad impulses were regarded as evidences of demoniacal possession, or God-inspired action, the patients so affected, and rendered conspicuous by their conduct, received at the hands of their fellow-creatures treatment which, however curative in intention, must have tended rather to elimination than recovery, and in

this respect differed little from that meted out to the physical illnesses, wounds, and accidents of the patients of bygone times.

Yet the treatments which were carried out were largely thought to be curative ; and we find men as assertive of the benefits to be derived from a diet of apples, from frequent scourgings with sticks, and rapid revolutions in specially constructed chairs, of the administration of hellebore and borage, and many other means regarded by us as either useless or ingeniously cruel, as men are to-day of the benefits to the insane of costly and home-like surroundings, freedom of action, the use of organotherapy, and all our modern methods of treating the insane which we daily put in practice.

One of the first difficulties in dealing with an acute case of insanity presented to us is that it is often impossible to promptly classify an individual case so as to place it under a distinct heading, and much valuable time may be lost in the mere contemplation of the case by the most energetic of us before we can decide to commence that active treatment which is demanded of us if the patient is to owe his recovery to our intervention—time which may mean the coagulation necrosis, and chromatolysis of the nerve-cell, and the death mayhap, of the infinitely complex organ whose mere functional disturbances are so alarming, whose comparatively slight organic changes mean physical wreckage and an *intra vitam* mental death.

What, then, can be done to remedy the evils of vague and excessive classifications so as to more quickly develop the dark negative and bring out the clear picture of the mental state of our patients? Can we as yet but empirically treat a disease which we can but also vaguely, symptomatically, and empirically classify?

I think it may be possible ere long for those of great ability and with scope for their labours to select one acute and sharply defined mental disease and devote all the annual work of our laboratories and hospital wards more directly and particularly to it and its therapeutic and clinical aspects. Let all in asylums give the selected disease a steady and continued investigation. If this were done it would focus the work of many able men on this one object, and it seems to me would be more productive of advance in knowledge than the more largely conceived and varied investigations by individual workers, no matter how productive of good such work has

undoubtedly been in the past. Let us never forget that the barbarisms of the past were thought to be curative. Men have recorded their opinions of such treatment in eulogistic terms, and they undoubtedly were credited with effecting cures in their day.

"All roads lead to Rome," and in the estimation of the value of one particular treatment it must be ever borne clearly in our minds that recoveries have so far resulted from many apparent causes (as treatment in asylums is very varied), and that the good result may possibly be due to time, opportunity, or individual peculiarity more than to the course of treatment we are inclined to attribute it to.

In writing this paper I have not brought anything new before you, nor do I intend to announce to you the successful application of some new remedy followed by the hasty enumeration of a series of recoveries by its use ; but I wish to frankly acknowledge the personal difficulties of one who is, like those whom I address, daily seeking through comparative darkness for more efficient weapons wherewith to treat an ever-present mischief, for a more certain and efficient means to cure the diseased minds of those who are daily entrusted to his care.

With an increase of knowledge professional differences of opinion as regards the value of treatments must die out, and our art and science must gain in public esteem and usefulness. Let us, then, do something more than heretofore to produce this unanimity, so that each one may feel a confidence in the carrying out of a remedial course which has received the unqualified approval both of the scientifically and clinically minded of the psychologists of to-day. If we regard the noisy restlessness, verbigeration, and incoherence of the maniac as we regard the dulness on percussion, and rusty sputum, of a patient suffering from pneumonia—merely as the symptoms which enable us to classify and promptly treat their respective diseases,—surely there is as much reason to treat with uniformity the mental as the physical disease ; and in securing the best and most successfully uniform treatment our best efforts must be used in the interests of our race. Each new suggestion for the application of new remedies ought to receive as much attention, and record, and investigation by different hands and different minds in our mental as in our general hospitals ; and I think that uniformity on lines of recognised treatment is as

imperative, and will undoubtedly be as practicable with us in asylums as it is in general medical and surgical practice.

At present, if it were asked of us what drug or medicinal means we used to treat our last twenty acutely maniacal or melancholic patients, we would be puzzled to find an answer. Yet a goodly number recovered, and one is ever inclined to attribute the recovery to one or other of the therapeutic measures we adopted ; but what ultimately effected the change we are loth to say. Even of the patients chained to the walls of the old asylums it is recorded that some recovered and were discharged as cured. And we who are faced with the treatment of the insane of to-day can but say that, however uniform our treatment is as regards kindness and the provision of amusements and comfort of our people, we have yet much to do in the provision for them also of a more systematised medicinal treatment.

I fancy that it has been the feeling of most of us at times that we were engaged in a very unequal and single-handed contest, and the feelings of a psychological therapist might not inaptly be described as similar to those of a naked fencer with an armoured adversary who responds to his most furious onslaught by a calm indifference, or some unlooked-for and outlandish response to his attack, which leaves him almost bewildered, or helpless and dismayed. He must, however, again think out some new line of treatment, some new method of attack ; and happy is he if he can discern a joint in the armour, or secure a response to his efforts.

I have selected a few of my cases as being of sufficient interest to bring before you as examples of the somewhat bewildering difficulties of treating acute patients. They are intended to show you that recovery does occur apparently as the direct result of drug treatment, and that apparently somewhat similar cases sometimes recover without any specialised drug treatment at all, and that until our knowledge increases I fear I shall be unable to increase my annual recovery rate beyond its present average, *viz.*, 53 *per cent.* on my annual admissions.

The first case I wish to record is the remarkable case of A. D—, admitted to St. Patrick's Hospital August 1st, 1900, æt. 33 years, barrister-at-law, suffering from delusional insanity. This patient had been deported to Scotland, and had been under treatment in the

Murray Asylum in 1898, and in the Crichton Royal Asylum in 1899. He had been travelling with attendants in England prior to his being admitted here. He was brought to the hospital with his legs tied together with ropes, to facilitate his journey back to Ireland. His present attack, which was of two years' duration, began with the usual symptoms of an on-coming melancholia—sleeplessness, restlessness, —and he complained of a feeling of numbness of his skin, and a great and irrational anxiety lest he should be unable to support himself and his wife. I was told he masturbated frequently and shamelessly, and he was treated for this condition by a Dublin practitioner, who circumcised him. Being none the better for this proceeding, he was taken to London, where another surgeon, presumably with a more artistic sense of proportion, re-circumcised him. After these proceedings he was removed to Scotch asylums, where he remained for two years. On admission here he was in an apparently stuporose and partially demented state, very resistive and violent if interfered with or made to move, refusing to speak or answer questions, swaying his body from side to side, chewing his clothes, and sucking his fingers. It generally took four strong attendants to give him a bath or move him to the grounds for exercise. He daily chewed the sleeve or collar off a coat, and frequently destroyed both a coat and waistcoat a day. If asked to cease destroying his clothes he denied doing so, and his condition might be described as one of negativeness. If asked did he like Dublin, he replied, "This is not Dublin;" and when shown the well-known Wellington Monument in the park, which can be seen from the hospital windows, he still refused to recognise his country. If one bade him good morning, he replied, "This is not morning;" if good night, "This is not night." If asked to look at a flower in the grounds his response was, "That's no flower." If we pointed out the sun to him we were told, "That's no sun." During this stage of his illness he was exceedingly wet and dirty in his habits, daily passing urine and fæces in his trousers, while standing swaying his body from side to side. During the period which elapsed between his treatment in Scotch asylums and his admission here, he had his hands tied nightly to the bedposts in order to prevent his masturbating, and for long after his admission here he slept with his arms raised above his head as the result of this treatment. He never was observed to masturbate after his admission here.

His pupils were normal and reacted to light and accommodation, his organs healthy, and a small quantity of sugar was found in his urine on admission, sp. gr. 1030. He was treated for this by 1 gr. codeia being administered daily, and the sugar disappeared shortly after admission and did not afterwards complicate the case.

His muscular system was exceedingly rigid and his reflexes slightly exaggerated. His condition being unaltered on September 17th, 1900, he was put to bed, and thyroid extract administered in 5-gr. doses, gradually increased till he was taking 50 grs. per day. This treatment was discontinued on October 20th, there having been no reaction whatever or good results obtained apparently by its use.

The note on February 14th, 1901, describes him as standing all day long at the ward door, rushing violently out whenever he could, and

then standing aimlessly outside, refusing to either go on or go back, rocking his body from side to side, and as wet and dirty in his habits as a general paralytic; the note in the case-book being that he shows no sign of intelligence. He had ceased chewing his clothes fourteen months after admission. It was observed in July, 1902, that a slight change had occurred, that he would answer questions and speak rationally, and showed a decided taste for riddles and conundrums, which he always tried to answer if asked in a joking way by the attendants. He was again put to bed and treated with large doses of thyroid extract, which seemed to produce no effect whatever, neither a rise of temperature nor a more rapid pulse-rate being observed to occur from its use, nor did it seem to reduce his weight. His physical health continued excellent.

On October 9th, 1902, the first noticeable change occurred. He still stood about the doorways, but looked more intelligent and increased slightly in weight. He steadily and gradually improved, and was completely recovered about May 1st, 1903, nearly three years having elapsed since his admission to the hospital; and in the fifth year of his illness his recovery took place. He has a distinct recollection of all that occurred around him during his apparently stuporose state, and he even recalled to my mind the efforts I had made a year ago to draw him into conversation, and recollected the very words I spoke to him, both then and afterwards. He has a distinct and accurate memory of all his experiences both here and in England and Scotland during his illness.

A short period prior to his discharge it was discovered that he suffered from thread-worms in his intestines, which were immediately actively treated and eliminated. Whether the presence of these parasites was the *fons et origo* of the diseased state I cannot say. The illness,—which commenced by peripheral nervous irritation of the genito-urinary tract, as shown firstly by the self-abuse and glycosuria, and subsequently by the chewing of the clothes and muscular rigidity,—may have been the result of a visceral reflex irritation caused by urates. The remarkable recovery in this case, the clinical treatments by thyroid and codeia, and lastly, the exhibition of vermicides, may be my excuse for reporting to you at such length a case which is the most remarkable I have seen for some years.

CASE 2.—M. C—, an unmarried girl æt. 20 years, admitted to hospital September 14th, 1901, suffering from acute melancholia. Father committed suicide by cutting his throat. Brother believed to have also committed suicide. Present illness of four months' duration, and believed to be due to business worries and a severe wetting during a menstrual period, which was supposed to have produced amenorrhœa, from which she suffered, and for which she was taken to a gynæcologist. She last menstruated six months prior to her admission. The night after her visit to the gynæcologist, who examined her pelvic organs, she started out of bed, broke the lamp, and made a most determined attempt to cut her throat with the broken fragments of glass. Her mother, who was sleeping in the same room, could not prevent her severely lacerating her throat. On admission she was

found to have several deep lacerated wounds and one deep punctured wound which was in very close proximity to her carotid artery, but had not opened the large blood-vessels of the neck. She was in a semi-stuporose state, her circulation very feeble, her hands blue; she was sleepless at night, and answered questions very slowly. Her pupils are very variable, at times widely dilated and a few hours later contracted; constantly picking her finger-nails, and at times weeps and cries bitterly, saying she is ruined and disgraced, and that everyone is calling her names. Suffers from hallucinations of hearing. Her reason, she says, for attempting to commit suicide was that she knew her mother was going to kill her, and in order to save her mother from sin and subsequent punishment, she decided to destroy herself. Examined carefully, we detected distinct crepitation at apex of right lung.

She improved very much and did a good deal of nurse's work in the ward, and said she would wish to become a nurse. Says she suffers no annoyance from voices now, two months after admission, and is bright and cheerful in her manner.

In December she had a relapse, and seemed to be as melancholic as on admission. Her catamania, which had now been absent for nine months, returned, and she suffered more from her old hallucinations and depressing delusions than before. Towards the end of December she again became bright and cheerful, and was occupied at house-work; grows worse towards evening.

In January she had another fit of depression, and seemed to be as bad as on admission, saying she is to be killed, and imagining she has brought some vague misfortune upon all belonging to her.

She again became bright, and again depressed, during February and March. Menstrual periods are now normal as regards both time and quantity. Her hands are blue and her general circulation feeble, but her physical health is much improved, and her lung trouble has apparently disappeared. Her condition of alternating between depression and brightness continued, and on March 2nd I decided to put her to bed and give her a course of thyroid extract. On March 15th, 1902, whilst undergoing this course of treatment, she jumped out of bed suddenly and rushed to the window, breaking the glass, and was prevented by the nurse, with difficulty, from injuring herself. Says she has ruined her family.

She was still kept on the thyroid extract, and on March 22nd the thyroid treatment was stopped, as her temperature was raised and her pulse and respirations increased in frequency. Mental state very variable, one day depressed and one day bright, but alternation more frequent; she gradually lost the fits of depression, and left the hospital almost recovered on March 31st, 1902. I have made inquiries recently and find she is quite well, and has had no recurrence of her trouble since she left us. This is a case in which the thyroid extract seemed to produce a very desirable result, and to hasten, if not absolutely to cause, her recovery.

The next three cases which I shall simply describe received no specialised drug treatment at our hands, and yet recovered, and have since leaving us done well, and have had no return of their illnesses.

CASE 3.—R. J. H—, male, æt. 21, clerk and book-keeper, admitted July 29th, 1901. Sister had been patient here and recovered. Whilst on a fishing excursion this patient wrote out a dying statement for his family's benefit, and with a penknife opened his radial artery. Medical help was at hand, and the patient was promptly admitted here.

His condition on admission was one of profound depression. He said he had ruined us all, that he had contracted syphilis, which was untrue, and that he would give us all this disease. He remained in a semi-stupid, delusional state for three months after admission, when he developed acute mania, became again suicidal, and required the padded room at night. Noisy and restless. This condition was not long maintained, and he again became melancholic and depressed.

He remained in this state for some months, alternating between exaltation and depression, and it was remarkable that as soon as he became restless and talkative sordes appeared on his lips, and his tongue became furred. I ordered him salicylate of bismuth, 10 grs., three times daily, and again a course of calomel, 5 grs., and salol in 3-gr. doses during his periods of gastric disorder and mental excitement. He gradually recovered, and I had recently a letter from him saying he is well, and has been employed in farming work, and is leading an open-air life in one of the colonies. The only drug treatment used in this case was the course of intestinal antiseptics, which may have shortened his attack or hastened his recovery.

The next case I shall mention to you is one of some interest in connection with the article by Dr. Bruce which appeared in the last issue of the *Journal of Mental Science*. Dr. Bruce, you will remember, claims to have discovered and isolated a bacillus which presumably causes mania. By the hypodermic injection of turpentine, he produced an aseptic abscess, which, according to his experience, seems to have a remarkably curative action upon this disease.

M. W—, a stout lady, æt. 50, was troubled with gouty eczema of her legs for years. A "gamp" nurse was employed to look after her in her own home. She was of temperate habits, and had never been previously insane. Her father and mother had been insane; brother eccentric. Admitted to St. Patrick's Hospital from a private asylum on February 2nd, 1903.

The history of her attack was as follows:—She rushed out of her house into the street in her nightdress, pursued by her nurse, who endeavoured to control her. Both patient and nurse were arrested by the police and removed to the station, where the former was recognised to be insane. She was subsequently sent to a small private asylum, where her furiously maniacal condition was controlled by a strait-waistcoat; she was there found by our nurses tied to a portmanteau and was admitted here in a condition of acute mania. For a fortnight after her admission she shouted and rolled on the floor, and was with difficulty prevented from injuring herself. She tore her clothes and was violent to those about her. On February 13th the note in the case-book states that she is almost rational, quiet, and the excitement has passed off; is much distressed by the recollection of her recent illness, and appears to have suddenly changed for the better. It is most interesting to note that at

this period of sudden recovery a small abscess formed on the sole of her foot at the metatarsal phalangeal joint under the great toe, as the result, I fancy, of the continuous dancing and jumping on the floor. Her foot was much swollen, and after freezing the part I made an incision into the abscess, evacuating a drachm or two of healthy pus. From this time on her mental state cleared up, and she almost completely recovered by the 25th of last month, and was transferred to St. Edmundsbury, and is shortly to be discharged. The old gouty ulcer on her leg has healed, and she is in robust physical health. A microscopical examination of her blood shows that her white blood-cells are lymphocytes and polymorphonuclear leucocytes. No leucocytosis; a leucopenia, if anything, being noticeable. It will be interesting, therefore, to note if the recovery will remain permanent. She was discharged, and remained a month at home, but has relapsed and had to be readmitted in a sub-acutely maniacal state.

M. A. S.—, æt. 42 years, admitted March 13th, 1903. Unmarried. Second attack. Duration previous to admission, three to four weeks.

Cause of attack unknown. Family history unknown.

Previous history.—She had acute rheumatism when about twenty years old, which left no complications. Ten years ago she had an attack of melancholia, which lasted about six weeks; she was treated at home and recovered perfectly, but since that she was subject to occasional fits of extreme depression. The present attack began about three or four weeks before admission, with insomnia, change in habits, and depression.

When admitted to hospital she appeared to be in good physical health, but was very silent and depressed. She answered questions in a slow, hesitating, and incoherent way. Her memory, both recent and remote, was a blank. Her urine contained a large amount of urates, but otherwise was normal. She had hallucinations of sight and hearing. She slept badly at first, and was treated as follows:—Potass. Bromidi, $\mathfrak{z}\mathfrak{j}$; Mag. Sulph., $\mathfrak{z}\mathfrak{j}$; Aq. Chlorof. ad $\mathfrak{z}\mathfrak{v}\mathfrak{i}\mathfrak{i}\mathfrak{j}$; Sig. $\mathfrak{z}\mathfrak{s}\mathfrak{s}$ ter in die.

After admission and during the month of March she remained in a stuporose condition, with occasional outbursts of impulsiveness, during which she broke windows and pictures and threw articles of furniture about the wards. Her memory remained a blank, and her statements in answer to questions were very irrational, such as that she had lived at one place for 1000 years. In the beginning of April she showed some signs of improvement; she attempted to do some sewing. She was sent out for drives very often, but as yet she took little interest in her surroundings. She was put on a tonic (Easton's syrup). By April 11th she was greatly improved; she was bright, more active, cheerful, and talkative; her memory for recent events was coming back, but that for the time of her present acute attack was still a blank. A week later she was apparently quite sane. She had no recollection of her attack, or the events preceding it. She stated that she often goes over two menstrual periods without being unwell, but that now she was more regular than formerly. She was last unwell in February, 1903. She complains of occipital headaches, for which she has been in the habit

of taking antipyrine. She left hospital on April 18th, 1903, and has made a good recovery and resumed her occupation.

J. M—, æt. 42 years, admitted April 21st, 1902. First attack. Cause, business worry.

History.—Patient's family were stated to be nervous, but no other history of neuroses or insanity. Patient was of sober habits; he had suffered from rheumatism seven years before admission. Duration of existing attack, four months. He attempted suicide by throwing himself from the Irish mail between Rugby and Holyhead, and also threatened to end his life on different occasions.

On admission.—Patient's bowels were constipated. Urine normal except for presence of urates. Heart-sounds normal; pulse normal in rate, but bounding and of high tension. Lungs normal. He was silent and self-absorbed, with depressing hallucinations of sight and hearing. He said he was being watched and followed by policemen, and was to be charged with some imaginary crime, that he was ruined, and that his employees were leaving his service; he stated that he was tired of his life, and would take measures to end it. During his stay in the hospital he was usually in a state of depression, worrying about his business, which he thought was to be sold out because he saw some advertisements of auctions in the papers. He thought his children were dead or not at home, and he stated that at night his back was being burned with a red-hot poker, and that he was to be burned alive or killed by me. Sometimes he got out of this mood and was bright and somewhat cheerful and very talkative, taking part in outdoor and indoor games and doing a little gardening; continually pulling the hair out of his head and beard. Patient remained in this condition till September 12th, being then quite as delusional as on admission; very irritable and depressed during the day-time, but sleeping well at night.

On September 27th patient was much improved mentally, clear in conversation and rational and comparatively sane, and on October 3rd he was removed home by his friends, being then quite well. He called at the hospital in the beginning of this year; he was then in perfect health, and had been working at his business for some months.

E. A. S—, æt. 39, admitted December 10th, 1901; unmarried. First attack. Causation: predisposing, over-strain nursing relations; exciting, love affair.

History.—No insanity or other nervous disease in family. Patient had been ill about six weeks before.

Admission.—She seemed to be in good general health, a well-nourished, intelligent lady. She was in a very restless and despondent condition. She believed that the devil had taken possession of her, and that her entrance here was the first step towards the infernal regions.

Heart-sounds normal; pulse of high tension; lungs normal; eyes and sight good, but pupils were dilated and non-contractile to light. Bowels constipated; urine acid, abundant urates, but otherwise normal. Patient was stated to have a tendency to suicide. She was put on the following

mixture :—Potass. Bromide, ʒj ; Magnes. Sulph., ʒj ; Tinct. Hyos., ʒij ; Spts. Ment. Pip., ʒss ; Aq. Chlorof., ad ʒ viij ; Sig. ʒss ter in die.

During her stay in the hospital patient's condition was variable up to the first week in March, 1902. The day after admission she threw her gold ring into the fire. She said it belonged to the devil. Usually despondent and restless, with depressing delusions ; sometimes she brightened up considerably and chatted with those around her, saying she wished she could resist her depressing emotions ; and occasionally she did some needlework. She was ordered an iron tonic on February 1st. In the beginning of March she seemed to improve very much. She was bright and cheerful, and rational in manner. She stated that her former depressing thoughts had no effect on her now. Her memory and powers of observation appeared to be normal, and, having continued to improve, she left the hospital on April 29th, 1902, perfectly well. This was a case of what one might term an accidental insanity caused by the strain of anxiety and nursing several aged and infirm relatives in their last illness. She has since married and is perfectly well, and has had no return of her troubles.

These three cases are of interest as showing the recovery of three patients who were treated in no very special manner, and who all suffered from acute and recent insanity, and all of whom recovered.

I don't desire to weary you with the stories of other patients who have been treated in our old hospital, and who, affected in somewhat similar ways, apparently often owe their recoveries to different treatments. What I wish to impress upon those engaged in similar work to my own, is the fact that we are undoubtedly often prone to attach a fictitious value to some of our curative means ; and to hope that, in carrying out—as we always will carry out—new and ever-advancing methods of dealing with the mental diseases of our patients, we will not hastily accept any fixed lines until we have found them to be the best available in our present state of knowledge.

Let us endeavour to separate the drug of spurious from that of real value. It seems desirable that we should more speedily discard those drugs which we have weighed in the scales of past experience and knowledge and found wanting, and be ever more careful that whatever new drugs are substituted shall not hold the field one day longer than their utility and effectiveness entitle them to.

The great difficulties of solving the problems of psychiatry are only rendered greater by a too hasty conclusion as regards the actual and relative values of new drugs and new treatments ; whilst on the other hand it may not be uninteresting to remember that personal respect for Galen and Hippocrates

caused many disciples to follow blindly for centuries the erroneous views of these great fathers of medical science, thereby hindering the ever-onward march of true knowledge, obtainable only as the result of personal scientific observation, enterprise, and investigation, and an ever-widening school of thought.

DISCUSSION

At the Meeting of the Irish Division at Enniscorthy, July 3rd, 1903.

Dr. DRAPES said that Dr. Leeper had remarked in his interesting paper that recovery was due sometimes to systematic and sometimes to special treatment, while sometimes it took place with no treatment at all. He thought that it was more difficult in insanity than in any other disease to say whether or not recovery was actually due to the measures used. He regarded simple nursing, with supporting and, where necessary, sedative treatment, as the principal remedial agent in acute cases. Intercurrent bodily disease sometimes did improve the mental state, as in a recent case admitted with wounds on the hands, in which resulting septic abscesses seemed to have a favourable influence on recovery. Rest treatment he regarded as one of the best at our disposal. He had lately had a patient suffering from adolescent insanity who had become worse from being sent into the open air, whereas rest in bed resulted in very considerable improvement.

Dr. DAWSON, referring to the stress laid by Dr. Leeper on uniformity of treatment, was of opinion that although uniformity of principle was desirable, as, for example, the broad principle of seeking to influence the mental state by improvement of the bodily nutrition, every case should be treated on its own merits, and not by any hard and fast method. Some cases did better with rest, others with open-air exercise, while in others good results seemed to be got from the prolonged bath; it was necessary to try method after method until the one to suit the individual case was found. With regard to the case in which there was glycosuria, he was coming to the belief that sugar in the urine, if transitory, was of little importance, and he even had a patient suffering from persistent glycosuria who was in good bodily health and actually putting on weight. Aspirin, as recommended by Williamson, gave good results in lessening the sugar excreted. The effect of intercurrent febrile conditions, like that induced by thyroid extract, was probably to be explained by the anabolic reaction which followed increased katabolism; but the method of turpentine abscesses had been tried in Italy and discarded. He thought the difficulty as to whether or not recovery was to be attributed to treatment arose in other diseases as well as mental.

Dr. NOLAN remarked that one most important method of treatment had been overlooked by previous speakers, and that was the moral treatment, to which he attached the highest importance, particularly with regard to chronic cases.

Dr. NORMAN desired to protest against the apparent distinction drawn in the preamble to the paper between "scientific" and "clinical" observation. Clinical observation is scientific, for science is knowledge and facts are facts whether they are observed at the bedside or in the laboratory. They had heard of a recovery rate of 53 *per cent.*, but such a ratio is only obtainable where cases for admission are selected with a view to curability. He wished he could believe that the practical results of modern methods would prove so very much better than those which had been attained when the old-fashioned methods were in vogue, which are now so contemptuously spoken of. He had been much interested in the first case described, having been acquainted with the patient. Two important facts in this case were the existence of a bad heredity (a brother being insane) and the recent marriage of the patient. With regard to the latter point there was perhaps a moral as well as a physical factor, since the immediate apparent cause of the attack was anxiety lest he should be unable to support himself and his wife. As regarded glycosuria, he agreed with Dr. Dawson that it did not seem of much importance in this case.

Dr. LEEPER, in reply, thanked the meeting for the reception accorded to his paper, the main object of which was not to advocate the treatment of patients in bulk, but to give such examples as might furnish tangible facts for the treatment of cases individually. In treating pneumonia, for instance, one knew what measures to adopt without delay, and it would be desirable that one should be able to treat acute insanity as promptly. Rest was a very good treatment in certain cases, but in many it was difficult to adopt. As regarded Dr. Norman's remarks with reference to his statement about clinical and scientific observation, he had no intention of creating the schism of which he had been accused. What he wished to advocate was that clinical and laboratory research should work conjointly for the elucidation of mental disease.

Notes on a Case of Graves' Disease with Mania. By
J. P. GRIEVES, M.R.C.S.Eng., L.R.C.P.Lond.

THE following case is one of chronic Graves' disease suddenly taking on an acute form with mania and resulting in death in fourteen days, with pyrexia during the last week, there being no pulmonary or other complications.

The patient, a married woman *æt.* 43, had never been treated for Graves' disease, but I had by chance noticed that she had very marked proptosis at least twelve months before attending her.

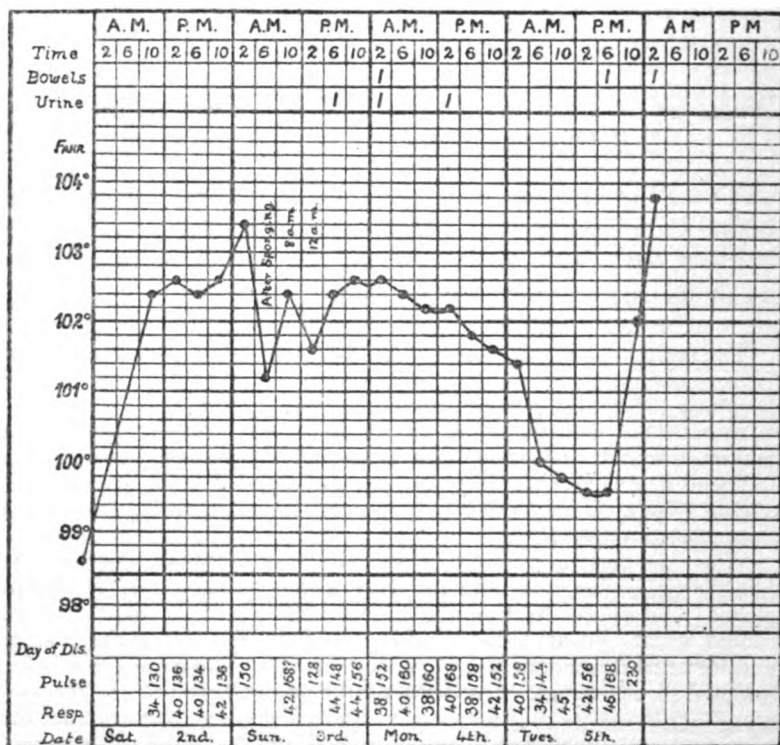
About three months before the onset of the acute symptoms, the patient, who had previously been rather an economical person, began to spend money very freely, going out and ordering large quantities of useless things, on one occasion £17 worth of plated goods, including a dozen butter knives!

When she had run up bills to the extent of £150 she confessed to her husband, who was naturally very angry, being a man of limited means; and in the heat of the moment he remarked that they were ruined, which appears to have made a great impression upon the patient, and for at least a month she remained entirely indoors to avoid being tempted to buy things. On April 24th I was called in to see her, and found her in a state of great distress and excitement, pacing about the room and exclaiming that they were ruined, that her child was starving, and that it was all her fault. She declared there was nothing to eat in the house, though they had just finished a meal.

On April 25th the patient was quiet but seemed very depressed, as if brooding over things; in the evening she again became very excited, rushing about the room and exclaiming that they had no money, although to convince her her husband produced a handful of gold from his pocket. This attack of excitement passed off in about an hour, and she then discussed the matter with me quite rationally, and said she did not know what she was doing when these attacks came on. During the night she again became very violent, and could not be induced to stay in bed.

On April 26th I kept her in bed and obtained a mental nurse for

her. Her condition then was as follows:—There was very marked enlargement of the right lobe of the thyroid, very marked protrusion of the eyeballs, which gave the face a most maniacal expression, Stellwag's sign being very marked, but Graefe's sign slight. There were no noticeable tremors. Pulse-rate 130 per minute. Temperature subnormal. The patient was very restless, constantly turning from side to side, would not answer usually when spoken to, but at intervals said



that they were ruined and that everyone would very soon be dead. If she was not constantly restrained she would get out of bed.

April 27th.—Patient in much the same condition, but it was so difficult to keep her in bed that she was allowed to be up for a time in a dressing gown, during which time she constantly kept carrying a coal-box from one side of the room to the other. No coherent remarks could be elicited from her, but she stared at one wildly when spoken to. It became increasingly difficult to induce the patient to take food at this time, and until the termination of the case it was the same.

On April 28th Dr. Rayner saw the case with me and recommended

her removal to an asylum, and arrangements were made to have her removed.

On the evening of April 30th the temperature, which had previously been subnormal, began to rise, and on May 2nd had reached 103.4° . I had the patient sponged, when it fell to 101.2° . On May 3rd I was surprised to find that *the thyroid gland could only with great difficulty be felt at all, the enlargement of the right lobe having almost entirely disappeared. The protrusion of the eyeballs was also very much less, less than it had been for the previous twelve months.*

The temperature gradually declined from this time, on May 5th being only 99.6° . The mental condition remained about the same. The patient was still very restless, and unless restrained constantly got out of bed; there appeared to be very little physical weakness, and until the end she got out of bed almost at one bound.

Between April 29th and May 3rd there was a good deal of diarrhoea, and throughout the patient passed both urine and fæces in bed or on the floor, without attempting to retain either. There were no pulmonary complications at any time. The pulse-rate varied from 130 to 170 per minute, and at no time was it less than 128.

On the evening of May 5th the temperature again rose, reaching 103.4° , and the pulse-rate rose to 230 per minute. The patient died at 2 a.m. on May 6th.

Occasional Notes.

The Annual Meeting of the Medico-Psychological Association.

The annual meeting has again testified most strikingly to the growing influence and activity of the Association. This is evidenced not only by the increased number of members, the large attendance, the number of communications, and the vigorous discussions, but especially by the activity of the various committees, whose reports represent persistent work by a large number of members throughout the year. Lastly, the stability of the Association is proven by the flourishing state of the finances.

The President's address, printed elsewhere, is sufficient evidence that the dignity of the office will be well upheld by the ability of the present holder. If legislation is forthcoming in the present year, the representative of the Association is

thoroughly acquainted with the needs of the insane and the reasons by which they can be enforced on the Legislature.

The communications read and discussed at the meetings were of exceptional value, and the demonstration by Dr. Mott was of the greatest interest. Full reports of these will be found in the JOURNAL.

The most important business of the meeting was the adoption of the new rules, and the committee (presided over by Dr. Urquhart), who have worked so long and arduously, are to be congratulated on the success of their work.

The committee appointed to revise the statistical tables have worked most sedulously during the year, but have not as yet completed their task, which is the most important matter that the Association has now on hand.

The least satisfactory matter in connection with the year's work is probably the paucity of competitors for the Association prizes. This, however, is no new thing, is but a repetition of the experience of previous years, and suggests the desirability of inquiring whether any improvement can be made in this respect. The junior members of the Association, for whom these prizes are instituted, can with rare exceptions possess the experience or opportunities of study necessary to produce a comprehensive monograph on any special subject such as these prizes demand.

The faculty which it is specially desirable to cultivate in them is that of observation and description. Would it not, therefore, be more within their powers and more calculated to stimulate their efforts to offer prizes for clinical reporting? Such a competition would be within the reach of every junior physician, and the competitors for such prizes would probably never be wanting. Such a competition would also tend to rescue clinical work from the unfortunate position into which it has fallen in English asylums. Our junior colleagues should be impressed with the indisputable fact that the finest laboratory work is valueless to the physician and is essentially unscientific, because partial and one-sided, if not carried out in collaboration with constant careful and minute clinical observation. If we think of what has been done in the study of aphasia, and of how unmeaning would be the attempt to investigate the conditions of the function of language by investigations carried on in the pathological laboratory alone, we can see how im-

perfect our science must always be while clinical work is neglected. In England, it must be confessed, we have been backward in this respect for many years and have not contributed those exact and laborious clinical studies which are to be found in the French and German psychiatric literature. This may be due to the unhappy system by which case-books have come to be regarded not as scientific records but as mere items of official routine—not as serious medical work, but as something to be compiled “to satisfy the Commissioners.” Whatever the cause, it is time to apply a remedy.

The Association dinner was numerously attended, and passed off in the most satisfactory manner. The change of date of the meeting unfortunately prevented the Lord Mayor from attending as a guest of the President, as he would otherwise almost certainly have done.

A large number of the members of the Association, on the invitation of the President, visited the City of London Asylum on the 18th July. They were there most hospitably entertained, and had the opportunity of seeing how an old institution had been remodelled to meet the requirements of the modern treatment of the insane. An interesting account of how the change was effected has appeared in a former number of this JOURNAL.

Sir Charles Bagot.

The retirement of Mr. (now Sir Charles) Bagot from the Lunacy Commission has been followed by a due recognition of his services in his promotion to the honour of knighthood.

The members of this Association attending at the annual meeting expressed their appreciation of the services of Sir Charles Bagot in moving a resolution to congratulate him on the honour conferred on him, and the feeling thus expressed is fully shared by those members who were not present.

Sir Charles Bagot, from the very outset of his joining the Commission won the confidence of the Specialty, and as years passed on this feeling has grown into the highest esteem and admiration.

Apart, however, from the feeling of personal congratulation, there is a strong feeling of satisfaction that such an honour has

been conferred on a member of the English Lunacy Commission. And we may express the hope that this may form a precedent which will be followed on the retirement of other members of the Commission.

No future recipient of such an honour, however, will ever have more thoroughly earned and merited it than Sir Charles Bagot. We sincerely hope that he may long enjoy his dignity and rest.

The Temporary Treatment of Unconfirmed Insanity.

The Commissioners in Lunacy, in their recently issued report, make recommendations in regard to the temporary treatment of unconfirmed insanity which are most satisfactory. These will materially aid in passing the clauses in relation to this matter contained in the Lord Chancellor's Lunacy Bill, whenever the Houses of Parliament recover their legislative activity.

The Medico-Psychological Association has done so much in helping forward this means of treatment that it would seem to be incumbent on it to consider whether it can do anything to ensure the efficient use of these clauses when, if ever, they become law. Their satisfactory working will depend on the quality of the guardianship obtained ; and the question which the Association might consider is whether it can aid the public and the medical profession in the selection of persons and homes best qualified or suited to the care of incipient and unconfirmed insanity. This question is by no means easy of solution.

The special qualifications for such guardianship are not to be proven with facility. Experience of treatment in asylums or elsewhere, although necessary, is not alone sufficient. The personal qualities and special experience of treatment in home life have to be otherwise acquired—usually, of course, by assisting in treatment of this kind. Although the special knowledge thus acquired might be tested by examination, the more important qualities, such as tact, etc., could only be arrived at through the testimony of competent observers who had had opportunities of noting these qualities in actual employment.

Hence the qualification for guardian of incipient mental disease should not only consist of a proof of knowledge of the

ordinary treatment of such disorders, but of proof of special experience and personal fitness. The latter qualifications could only be satisfactorily evidenced by the testimony of medical men who were themselves specially qualified to give such an opinion.

Beyond the question of personal fitness of the guardian is that of the suitability of other persons, if any, who would be associated in the home life, and of the house being also adapted to the reception of a nervous case.

A guardian to be efficient, therefore, should have special evidence of knowledge of the treatment of the insane, special personal recommendation of fitness, and a special recommendation for the household and home.

The difficulty is whether such qualifications can be tested or evidenced so that a list of guardians could be available to the profession and the public, or whether, as at the present time, the medical man or the patient's friends must be left to find a suitable guardian as best they can.

A list of qualified guardians would be a great advantage, but the difficulties of forming it are obviously very great. The possibility of overcoming these difficulties is worthy of consideration, and this Association might well debate whether it was within its power to take action in the matter.

The Pauperisation of the Insane.

Insane persons whose friends cannot pay a pound a week for their maintenance, are compelled, under existing conditions (with a few exceptions in the registered hospitals), to become pauper inmates of pauper asylums. Bitter injustice is thus inflicted on a numerous class who could pay from ten to sixteen shillings a week if by so doing the pauper classification could be avoided. Under existing conditions they are compelled to accept the degradation, and soon become reconciled to shifting their responsibility on to the shoulders of the ratepayers, becoming pauperised *de facto* as well as *de jure*.

There is no greater or more urgent need in England than the provision of similar accommodation to that which exists in abundance in Scotland. That such accommodation can be provided in England is amply proved by the very considerable

profits made by those county asylums which take cases at a pound a week.

Rumours have been rife of county asylums which contemplated taking private patients at very low rates, and it has been said that some institutions which are making large profits intend to apply a portion of their surplus to the assisting of such cases; but we are reminded that though Milton tells us hell is paved with gold, an earlier writer says it is paved with good intentions.

This at least is certain, that if the profits of the private annexes of the county asylums were applied in the direction suggested, they would do more indirectly towards the relief of the rates than when directly applied to that end, by stimulating friends and relatives (who now shirk their responsibilities) to contribute the major part of the maintenance of numerous patients who are at present entirely rate-supported.

The Home Care of the Insane Poor in England.

The absence of anything like a system of home care (or boarding out) in England is perhaps one of the most striking anomalies of our lunacy administration, and it is astonishing that, under the great stress of providing accommodation for the ever-increasing accumulation of lunatics in asylums, no serious or systematic attempt has been made to utilise this method of treatment.

In Scotland, as every member of this Association knows, this system has been in operation on a large scale for more than forty years, with unqualified success, both in regard to the welfare of the patients and to economy.

A contrast of the distribution of the pauper lunatics in the two countries in the year 1901 will demonstrate the importance of the difference.

Country.	Total pauper insane.	In asylums.	Per cent.	In private dwellings.	Per cent.
Scotland . . .	13,581	9,285	67·2	2631	19·3
England . . .	100,779	78,028	77·3	5541	5·5

These figures show that in Scotland 19·3 *per cent.* of the pauper insane are provided for in private dwellings, while in England the proportion is only 5·5 *per cent.* If 19 *per cent.* of the English pauper insane were boarded out there would be some *fourteen thousand* asylum beds vacant, and if the same economy resulted as in Scotland this would produce an annual saving of a quarter of a million sterling for maintenance, and (for some years at least) of half a million in building.

Economy, however, is not the strongest argument in favour of this system. The patients themselves are benefited ; they are found to prefer unanimously the home to the asylum life, and the beneficial effect on them is proved by a larger proportion being found capable of taking their places in the general population than would be the case if they remained in the asylums. It is, in fact, a better and more successful system of treatment for suitable cases than that provided by the asylums.

The boarding out of these patients in poor agricultural districts has been found to be a distinct advantage to their guardians, and the work of those patients is probably much more valuable than when confined in institutions.

That home care has not been carried out in England, in spite of these well-known advantages, is due to a variety of causes, the principal of which are :

(a) The capitation grant of 4*s.* per week to the inmates of asylums.

(b) The utter inadequacy of the English Lunacy Commission.

(c) The density of the population has also been adduced as a cause.

The capitation grant is probably the obstacle most difficult to overcome. The average weekly cost for the maintenance of patients in English county and borough asylums in 1901 was 10*s.* 4½*d.* per week, so that the parochial authorities, after the deduction of the 4*s.* grant, contributed only 6*s.* 4½*d.*, which is probably less than the patient would cost in an ordinary work-house, and is not so great as the cost of the boarded-out patient, which in Scotland amounts to about 6*s.* 10*d.* Under existing conditions, therefore, boarding out is not to the monetary interest of the parishes, and until this difficulty is removed there is no hope of obtaining their co-operation in extending home care.

The total cost of an asylum patient is probably about 13s. per week (allowing less than 3s. for the cost of buildings and repairs); hence, if a patient were boarded out from the asylum even at a cost of 9s. per week, the charge to the parish could be reduced by 1s. 4½d., whilst the asylum authorities would save the cost of the bed (say 2s. 8d. per week). Such an amount of saving, it might be imagined, would predispose both the asylum and the parochial authorities in favour of home care.

The Lunacy Commission, in order to cope with home care, would need to be very largely strengthened. In Scotland the home care cases are distributed in upwards of two thousand homes, every one of which is visited and inspected by a deputy commissioner at least once a year; if boarding out reached the same extent in England twelve thousand such visits would have to be made, but there are no deputy commissioners to perform the duty. If the English Commission had the same proportion as the Scotch to the number of patients supervised, it would possess eleven senior medical commissioners and eleven deputy medical commissioners in place of the three who are now supposed to be adequate. Can astonishment be felt, in face of this obvious inadequacy of the English Commission, that home care and other equally important matters are sedulously avoided? The existing skeleton commission must be recruited to fuller strength of numbers before it can undertake the work which it ought to perform, not only in this but in many other directions.

The argument has been advanced that home care is not possible in England on account of the density of the population. Many districts of England, however, are not more densely populated than the Scottish localities in which a large part of the boarding out is effected, and it has been found to be practicable even in such densely populated towns as Berlin.

If any county council would employ a suitable agent to search out in any given district the number of homes in which such patients could be received, it is probable that this difficulty would be found far less than has been imagined.

That some county council would have the public spirit to exercise the powers which are conferred under the fiftieth section of the Lunacy Act of 1890 is devoutly to be wished. Better than this, however, would be a combined action of

unions, county councils, and Lunacy Commissioners, especially if the movement were prompted by the initiative of the last-named body.

That home care is so utterly neglected is, we fear, a standing reproach to all who are entrusted with the provision of accommodation for the insane in England and Wales.

Dr. Chapman's Revision of the Tuberculosis Report.

The result of Dr. Chapman's investigations is stated in the forefront of his report to the Council, a report which is now being circulated with the same publicity as was afforded to the original document. He "does not in any way traverse any conclusions and recommendations contained in the report of the Committee on Tuberculosis, but, on the contrary, in several directions supports them more strongly." This finding, which we indicated in an occasional article in April last, cannot fail to be most gratifying to the Committee, and to every loyal member of the Association. It is late in the day to write in appreciation of Dr. Chapman as a past master in the science of vital statistics, and it was felt that a revision at his hands would assuredly place the questions involved beyond all doubts. This feeling he has entirely justified. The Association is greatly indebted to him for the labour he has bestowed upon the marshalling of these figures, and the lucid results of his inquiry. The whole of the documents and the returns originally made to the Tuberculosis Committee have been examined by Dr. Chapman, and the result is an independent, competent audit in which the vouchers have been compared and the final results published. It is again brought to notice what a vast amount of work Dr. France accomplished in the service of the Committee, and it is again to be observed that the conclusions and recommendations proceeding from his secretarial labours were not adopted by the distinguished physicians who formed that Committee without due care and consideration. Practical men are less concerned with methods than results, and the broad facts evidently pointed to the conclusions and recommendations so thoroughly endorsed on reconsideration of the minutiae by independent critics.

Of course we must all regret that certain arithmetical errors were found in the original report ; but these mistakes did not justify the exaggerated language of abuse and detraction, the charges of deliberate malversation which have been so freely made. The faulty decimals have not justified the methods nor the insinuations of the critics, who failed to challenge the original report when it was presented, and made haste to amend the work of the Association from the outside. As yet we have observed no indication of haste to acknowledge that, after all, the Tuberculosis Committee have had their position strengthened by the attack which failed.

Part II.—Reviews.

Archives of Neurology ; from the Pathological Laboratory of the London County Asylums, Claybury, vol. ii. Edited by F. W. MOTT, F.R.S., M.D., F.R.C.P. London : Macmillan and Co. Pp. 862 ; numerous plates and figures in the text.

WE propose here to pass under review a few of the articles contained in the second volume of the *Archives of Neurology* ; and we shall commence with an article by Dr. A. F. Tredgold upon "Amentia" (idiocy and imbecility). This covers ninety pages, and deals with the causes (intrinsic and extrinsic,—that is to say, environmental), varieties, and pathology of amentia. The material for this work was obtained from the London County Asylums, Darenth, and Earlswood. Family histories to the number of 150 were inquired into. It was found that a definite history of abnormality of the nervous system occurred in the antecedents of 82·5 *per cent.* of the cases, in 64·5 *per cent.* the abnormality was either insanity or epilepsy, and in 65·5 *per cent.* it occurred in the direct line. These figures are higher than the usual ones, but may be ascribed to the particularly thorough nature of the inquiry. It was found that alcohol in the parents was rarely the sole cause of amentia. Syphilis, also, was directly responsible very rarely. The intrinsic causes are discussed, such as consanguinity. As regards extrinsic causes ; amongst these are placed factors acting before birth (which in several instances is, of course, perfectly correct), such as fright of the mother, maternal impressions, and actual disease or ill-health on the mother's part. Can these be rightly classed as causes extrinsic to the germ-plasm ? In regarding such conditions as alcoholism, consumption, and other diseases in the parents as factors causative of amentia in the offspring, the author falls foul of the views of Weismann and others of his school.

In fact, as appears later, he expresses himself strongly against the doctrine of non-transmissibility of acquired conditions,—that is to say, against the wide meaning applied to that doctrine by the school referred to. *Appropos* of this we may mention the statistical inquiries which have of late years been carried out, which show the positive influence of alcoholic indulgence in the parents in the production of disease and degeneration of the nervous system (including amentia) and of tuberculosis in the offspring. (Anton: *Alkoholismus und Erbllichkeit*. Ladrage: *Alcoolisme et Enfants*. DeLavarenne: *Alcoolisme et Tuberculose*.) But undoubtedly in the great majority of the instances of extrinsic causation of amentia—and in this Dr. Tredgold agrees—there are hereditary influences bringing about a deterioration of the germ-plasm. In antagonism to what is commonly believed, the author considers that the importance of abnormal labour as a cause of idiocy has been much over-estimated. And his figures do not bear out the statement that a large proportion of idiots are first-born children.

The supposed causes of amentia which act after birth are shown—as would be expected from what has been already stated—to be nearly always contributory only, heredity being the main factor. Dr. Tredgold considers that every day medical experience (to which argument, however, we do not think those in antagonism to him attach much weight) is against the view of Weismann that the germ-plasm is not, or is only to a very small extent, influenced by the environment.

Referring to the question of the training of imbeciles, the author evidently doubts whether the results achieved are worth the expenditure. We are inclined to agree with him. It is all very well to pat that long-suffering pack-animal, the ratepayer, on the back, and applaud him for his “humanitarian” sentiments. But the time has come when he may well call for protection against the ignorance, callousness, and unheeding lust which propagate imbecility and leave the care of the victim to others. There are some sensible remarks upon the marriage question. The section on the pathology of amentia is based upon the microscopical examination of twelve cases—a small number, though the appearances are carefully gone into. In the twelfth case we are expressly told that there was no amentia; it is nevertheless classed as one of two cases of “secondary” amentia. Imperfectly developed nerve-cells were found to a greater extent in the frontal and parietal regions, and especially in the layer of small pyramidal cells. The horizontal nerve-fibres, too, showed greater diminution in these regions. But it would be desirable to have more work done upon these points. The results confirm previous observations, and go to prove that amentia is due to numerical diminution, imperfect development, and irregular arrangement of the nerve-cells. Nevertheless we require more information as to the rôle of the nerve-fibres.

A list of references and some plates conclude this useful article.

Upon the above article follows one by Dr. J. S. Bolton, assistant pathologist at Claybury, upon “The Histological Basis of Amentia and Dementia.” This covers 192 pages. The title hardly expresses the wide scope of the inquiry, though it denotes the main object thereof. Thus, Part I of the two parts comprised by the paper deals, among other matters, with the morbid anatomy of mental disease, the influence

of heredity upon the development of mental disease, the effect of gravity on the intra-cranial contents in the cadaver. Part II chiefly deals with the results of microscopic examinations of the pre-frontal cortex. The first part of the paper is based upon conclusions derived from clinical and pathological study of 200 cases of mental disease which appeared consecutively in the Claybury mortuary. A mere notice such as the present can convey no adequate idea of the immense amount of work which the author personally carried through in the way of case-taking, clinical and pathological observation. The 200 cases upon which Part I is based are divided into five groups, the first comprising those without appreciable dementia, and the others cases of dementia in ascending degrees to gross dementia. In passing, the value of Dr. Mott's cold chamber, into which deceased patients at Claybury are placed as soon as possible after death, is again emphasised; it made this research, amongst many others, possible. Notwithstanding the absolute necessity of such a chamber to secure the constancy of the *post-mortem* conditions, we do not think it would be rash to assert that the asylums possessing such might be counted on one hand, and that one need not possess the conventional number of fingers.

The cases in each of the five groups are classified and described, and a pathological summary follows for each group. Then follows a general summary of the morbid appearances in tabular form. From this and from the results given in the succeeding pages it appears that the naked-eye morbid changes existing within the skull-cap in insanity vary in degree directly with the amount of dementia present, and are otherwise independent of the duration of the mental disease. Further, the severer the degree of dementia the more extreme the vascular degeneration; the latter is independent of age. These facts are demonstrated in two tables. Gross vascular degeneration may exist without dementia, but in a cerebrum in which the cortical neurons have begun to degenerate the presence or incidence of such vascular degeneration will cause gross dementia.

Discussing the pathology of subdural deposits, Dr. Bolton describes experiments which cause him to conclude that many recent subdural films may occur at the time of death.

In a chapter on the "Etiology of Paralytic Dementia" it appears that syphilis was certain in 15 out of 19 private cases (79 *per cent.*), and in 82 *per cent.* of 72 pauper cases [we find certain recent continental writers put the percentage at anything between 40 and 80 *per cent.*], and psychopathic heredity was present in 82 *per cent.* of 72 histories amongst the pauper class, and in 85 *per cent.* of 13 histories (a small number from which to draw percentage conclusions) in the private class. Such are the facts, amongst many others of like interest and value, brought out in the course of Dr. Bolton's painstaking personal investigation. These two factors, psychopathic heredity (resulting in neurons of decreased durability) and syphilis, are essential to the development of paralytic dementia, in the author's opinion; though we cannot see that his figures prove as much. "Stress," in the widest sense, is important as determining the onset.

In remarks upon the regions of wasting, speaking generally, of the

cerebrum in mental disease, the author confirms, by observations on several hundred cases, the conclusions of others. The greatest amount occurs in the pre-frontal region; for further conclusions the original work may be consulted. As the same region shows under-development in the greatest degree in primary amentia, the conclusion is that the pre-frontal region is the one concerned with the highest functions of mind. For these reasons the author has chosen that region for the purpose of histological investigation, the results of which are embodied in Part II of his article. Accurate micrometric examination was made of regions of convolutions adapted for such in twenty cases, embracing normal persons, aments, and degrees of demented; and the results are embodied in a series of tables. The following general conclusions are reached:—In the pre-frontal cortex of congenital amentia degrees of under-development exist which vary inversely with the mental power of the individual. In the same cortex in chronic insanity without dementia there is under-development of the pyramidal layer of nerve-cells, the other layers being approximately normal. In the same part in dementia and dementia paralytica degrees of wasting exist, varying directly with the amount of dementia present. In extreme dementia all the cortical layers are approximately in the same condition as in the new-born child. This is strikingly shown in a table.

From concluding remarks upon the functions of the cortical cell-layers we select the following, in support of which cogent reasons are given:—"The pyramidal layer (No. 2) subserves the psychic or associational functions of the cerebrum." Twenty-two photographs illustrate this article.

Dr. Bolton's contribution is a piece of sound reasoning based upon a mass of observations laboriously collected and handled in a masterly fashion.

Dr. Mott has an article upon "The Prevention of Dysentery in the London County Asylums." He lays down four essentials for securing prevention: (1) a knowledge of the clinical symptoms of the different types (the atypical cases are often unrecognised); (2) systematic *post-mortem* examination of the bowels in all deaths; (3) the recognition of the importance of isolation and disinfection; (4) notification of all cases of diarrhoea and dysentery, and supervision of all suspected cases. An account is given of the various clinical phenomena and the clinical types met with in asylums, with illustrative charts. Morbid anatomy and pathology receive attention, and there is a series of instructive plates showing the naked-eye and microscopical lesions.

There never was any proof of the hypothesis that dysentery is due to nerve-degeneration dependent upon insanity, and in that view we see nothing tangible to discuss. But we consider that there is nothing improbable in the view that the normal control exercised over bacterial growth by the intestinal wall (in what manner is obscure) is impaired in states of insanity with their attendant lowering of trophic power, as evidenced in various ways. Such disturbance of the regulation of bacterial growth would manifest itself earliest in the region of the ileo-cæcal valve, and then in the large intestine.⁽¹⁾ A causative organism would under such conditions have greater licence, and would conceivably be aided in its morbid activity by the unchecked proliferation

of normal and usually harmless bacteria of the intestine. In this way mental disorder might be instrumental in promoting the morbid action of the organism causing the disease. As Dr. Mott observes, the disease is not confined to the insane. Nevertheless it is very rarely that those attending on them are attacked. That there is a predilection for asylums as compared with other (often overcrowded and no more sanitary) institutions is clear; and the ordinary arguments adduced to account for this are not, to our mind, adequate.

An instructive account is given of the outbreak and mode of spread of the disease in various wards of the London asylums. Dr. Mott has the satisfaction of showing that since the adoption of the views put forward by him as to the nature of this disease, and the methods of dealing with it, there is evidence of marked diminution in the Claybury Asylum; and the number of cases reported from all asylums has considerably diminished since notification has been in practice. Certain remarks upon the state of mattresses at some of the asylums, which mattresses were supposed to have been cleaned after contact with an infectious case, emphasise the need for steam-pressure disinfectors in all asylums.

In connection with Dr. Mott's instructive communication, the remarks of the Commissioners in Lunacy in their report for last year upon diarrhoea and dysentery in asylums are interesting. Amongst other points it is shown that the severer types of dysentery and diarrhoea prevail more in the larger institutions.

Dr. W. G. Smith contributes an article upon "The Range of Immediate Association and Memory in Normal and Pathological Individuals." This inquiry is based upon the experience that the attempt to grasp a series of mental impressions demonstrates the fact that there are definite limits to our capacity. A basis is thus furnished for a comparative research on normal and pathological persons. The procedure employed in the present investigation consists in the presentation of objects of one kind or another to the subject, who is asked, immediately or at some subsequent period, to recall what was presented. The number and character of the errors in recollection which are thus brought to light form a guide to the nature of the associative and reproductive processes involved. The author's earlier experiments were made through the visual sense (presentation of a series of letters of varying length), but this method was found to present difficulty in the case of the insane, and resort was had to auditory stimulation, with better results. Letters were written upon cards and presented in series of four to ten letters each. The letters were read aloud to the patient and reproduced by him orally. Somewhere between four and ten letters the capacity of reproduction appears to break down for average normal and for abnormal persons. The analysis made took account of the following:—As to whether the letters were rightly placed, transposed or inverted, wrongly placed, omitted, inserted, repeated, etc. Normal results, for comparison with results from patients in Claybury Asylum, were taken from eleven persons, nine of whom were of approximately the same grade of intelligence and education as the abnormal persons prior to their illness; the two remaining were of higher intelligence. After an interesting analysis of these Dr. Smith proceeds to state the pathological results which were obtained

from thirteen patients suffering from general paralysis in early (though varying) stages, and from "some degree of dementia, confusion, and loss of memory." For an analysis of these results the article must be referred to. The chief conclusions arrived at are that the method of immediate oral reproduction of auditory impressions seems to be well fitted to test the range and character of immediate association in different mental states; that with normal subjects the range of immediate memory has usually a definite limit, as a rule found to lie at five letters. When this limit is reached the addition of one letter to the series of auditory impressions produced a decided fall in the number of series which were reproduced quite correctly. With abnormal subjects the relations are similar but less clear. In abnormal cases there is a marked diminution in the power of reproducing impressions in correct order, and an increase of all the errors indicating the more severe forms of associational disorder. The method permits with some precision of the differentiation between the more permanent memory and the power of immediate reproduction.

Dr. Smith's article is an addition to the evidence for the practicability of psycho-physical experimentation in insane subjects. It is desirable that the limitations of such methods as that adopted by him should be determined more precisely by extensive employment. We fear that at present asylums in this country are, as a whole, totally unequipped, and their medical staff untrained for work in the domain of psycho-physics.

Dr. Mott has a note upon "The Choline Test for Active Degeneration of the Nervous System." Readers of the JOURNAL are doubtless aware of the work of Dr. Mott and Professor Halliburton upon this subject, by which they have shown experimentally that there is a proportional relationship between the presence of choline in the blood and the amount of nervous tissue undergoing active degeneration. Dr. Mott in the present note draws attention to the application of this test to clinical purposes. He is desirous that others should test the validity of his results. Mention is made of fourteen cases of organic disease of the nervous system, in all of which choline was present in abnormal amount. The method of applying the test is described, and it is apparent that this presents no special difficulty, and might be employed on a large scale in asylums and hospitals with a view to the accumulation of evidence. It is to be noted that whilst the test is applicable to cases of organic disease, the latter must be active at the time the blood is drawn. Among the fourteen cases we notice only two (tabo-paralysis) which could be classed under mental diseases, though mention is made of other cases of general paralysis in which observations were made. Whether the essential condition of active degeneration of the nervous system is to be found apart from paralytic dementia in ordinary asylum practice is, as far as we know, undetermined. In any case there is abundant scope for further observation.

As this volume contains some 860 pages it is impossible to deal with all the articles. We have endeavoured to give an indication as to the scope and quality of five out of ten of them. The other five consist of a very lengthy paper upon "Tabes in Asylum and Hospital Practice," by Dr. Mott (a demonstration of the etiological identity of tabes and general paralysis); an article upon "The Coagulation Temperature of

Cell-globulin and its bearing upon Hyperpyrexia" (Drs. Halliburton and Mott); and papers upon "The Pathology of Juvenile General Paralysis" (Dr. G. A. Watson); "Changes in the Medulla Oblongata in Diphtheritic Toxæmia" (Dr. C. Bolton); "An Examination of the Central and Peripheral Nervous System and Muscles in Acute Alcoholic Paralysis with Mental Symptoms" (Dr. S. J. Cole). We trust enough has been said to incite to the perusal of this valuable work. The Editor's personal contributions comprise a considerable section of the work, and his inspiring influence upon the contributors they would no doubt admit as readily as they acknowledge his advice and guidance.

Why is not the laboratory licensed for animal experimentation? Are we not entitled, *nous autres*, to ask this question? We cannot believe it is because Dr. Mott finds it unnecessary, since he can get experiments performed at the laboratory of King's College. The laboratory of the West Riding Asylum, Wakefield, was, and still may be, licensed; and it is not to be supposed that there would be any difficulty about obtaining a licence at Claybury if the governing authorities so desired. We must assume that they do not desire. We recently asked the question of the distinguished professor of anatomy in the medical school of a university town in Belgium, with only some 45,000 inhabitants and a strong priestly element, whether there were any difficulty in the way of animal experimentation at his school. The answer was, "Certainly not; why should there be? Such matters are left to those qualified to judge." What must be the reflection of the intelligent foreigner who visits the laboratory at Claybury and learns that for an institute so prominent there is no licence to experiment? We may, however, assume that one of his reasons for being in this country is to observe and muse upon those eccentricities of the national character which he has heard so much of at home, and one of which, under the designation of conscientious objection, has, perchance, already been under his notice.

Dr. Mott makes it clear that it would be advantageous to have the laboratory placed in London—a view which there is good reason to believe had its representatives when the question of establishing that institution was under consideration. We have heard of a technical legal objection, stated with ponderous impressiveness, to the carrying out of this idea. But even if this is sound, is it irremovable? If so, then we must subscribe to the opinion of Mr. S. Weller, sen., as to the law.

EDWIN GOODALL.

(¹) *Vide* Lorrain Smith and Tennant, "On the Growth of Bacteria in the Intestine," *Brit. Med. Journ.*, December 27th, 1902.

Dissertations on Leading Philosophical Topics. By ALEXANDER BAIN.
London: Longmans, 1903. Pp. 277. Price 7s. 6d.

A new book by Bain seems almost an anachronism. When most of us first began to interest ourselves in psychology Bain was already one of the fathers of the British associational school of psychology, and his books were looked on as classics. It is, therefore, a pleasure to find that

the venerable author is still able to send forth a new book. The miscellaneous studies which make up the volume, it must certainly be said, are not very new, some of them twenty years old, and have already appeared in *Mind* or elsewhere. They represent, however, Professor Bain's latest thoughts on the questions to which he has devoted a long life, and on this account alone they deserve attention.

The main interest of the book probably lies in its exposition of the distinguished author's attitude towards the critics of the associational doctrine and towards the modern developments of psychology generally. Thus in one essay he defends associational psychology against the various attacks of Bradley, Ward, and Wundt. His attitude towards Wundt's apperception theory, which is now by many held to supplant the associational doctrine, is moderate and conciliatory; he sees no real conflict, indeed, between apperception (though he thinks the word unnecessary) and association. In another notable paper he defends the position of those who hold that physiology has a real bearing on psychology, as against those who, like Stout and Bradley, take the side of "subjective purism" in psychology, and deny that physiology can be of any use in stating or interpreting psychic phenomena. Introspection must certainly, he agrees, be the main resort in psychological inquiry—the alpha and the omega: "It is alone supreme, everything else subsidiary;" but among the subsidiary aids, he argues, physiology must still hold a very high place. In other papers he discusses sympathetically the modern experimental methods of mental research, and discourses concerning the relations of psychology to anthropology.

Professor Bain has never been a daring initiator, and he is certainly not a brilliant writer. But in reading this book we realise afresh that daring and brilliancy are not the qualities most needed in laying the foundations of so subtle and complex a science as psychology, and that his special temper of mind—strictly empirical, distrustful of system, always candid and open, anxious to see everything in a dry light and to give due weight to every consideration—has deservedly won for Professor Bain a position in the history of his science which he is not likely to lose, however swiftly his work may be superseded. The book also enables us to see how fruitful the English associational school has been, and why it is that it has played so important a part in the evolution of psychology. The associational doctrine has proved too narrow, but it was produced by workers who clung very closely to fact and experience, and hence it is that the modern developments of psychology, though arising in Germany and France and America, have a true historical continuity with the earlier English school. (Since this notice was written Dr. Bain's death has been announced.) HAVELOCK ELLIS.

Das Wachstum des Menschen [The Growth of Man]. By Dr. FRANZ DAFFNER. Second enlarged edition. Leipzig: Engelmann, 1902. Octavo, pp. 475. Price 9 marks.

Dr. Daffner (who no longer spells his name with a *y*) here presents us with a new edition of a modest but useful little book, which he first sent out some ten years ago. It is not intended as a complete manual of

anthropology nor as a mere collection of figures, but discusses in a concise manner, and with close adherence to the most authentic sources, many of the anthropological problems—notably those connected with the brain and skull—which are most likely to interest the medical investigator. The author has been in correspondence with many noted anthropologists, and in various cases reproduces their unpublished opinions. His own opinions are very modestly introduced, and he is not anxious to formulate any theses or to pile up general conclusions. The thoroughness with which the new edition has been revised is proved, as is also the rapid development of anthropology, by the fact that the present edition is double the size of the first. There is unfortunately no index.

HAVELOCK ELLIS.

Encyclopædia Medica. Edited by CHALMERS WATSON, M.B., M.R.C.P.E.
Edinburgh : William Green and Sons. Thirteen vols. Price 20s.
net each.

This colossal work has now been completed in thirteen large volumes, and it reflects the highest credit on all concerned. It was a very heavy undertaking to combine in one series a reference work on medicine and surgery to the extent of 600 subjects fully treated. The collection of monographs thus presented to the profession is a marvel of ingenious contriving; for it is now easy, with the *Encyclopædia Medica* at hand, to come by the most advanced knowledge. The system of references and the combination of medicine and surgery strike us as particularly valuable, and we must heartily compliment Dr. Chalmers Watson upon the issue of his herculean labours. To take a bird's-eye view of the wants of the medical profession in regard to the latest results of world-wide science and art, to keep the proportions, to omit nothing of value, and to prevent irrelevant details, surely constitute claims on our attention and on our support which are but seldom manifest. But we must add to these considerations the indefatigable energy which has secured the services of so many leaders of thought and action in the profession. The summaries which preface all articles of any length provide a clue to the immense labyrinth. It is not only much knowledge, but accessible knowledge which is placed before us, especially as a full index is in preparation.

Supplemental volumes are to be issued from time to time to keep the work up to date, and arrangements have been made to permit of purchase by easy instalments.

The production of this work has been admirably carried out by printers and publishers, and nothing has been spared to make it of first-rate importance in all branches of the profession.

It is impossible in the space at our disposal to summarise the articles which deal with insanity. They have been contributed by well-known physicians, and present the latest facts and opinions in psychiatry with a conciseness, clearness, and authority which is creditable to our specialty. It would be easy to give extracts and indications of the scope of these articles, but we refrain in the hope that our

readers will peruse them in their entirety, although the chief use of such an encyclopædia on the shelves of asylum libraries must be to enable us to keep in touch with the great body of modern medicine and surgery in the midst of our ordinary avocations. To elucidate cases of difficulty and as a guide in the maze of contending opinions the *Encyclopædia Medica* will prove invaluable.

La Démence précoce. Par le Dr. G. DENY et P. ROY. Paris : Baillière et Fils, 1903. Pp. 96 ; eleven plates. Price 1.50 fr.

This little book gives an admirable *résumé* of the subject, and it forms a volume of that practical series *Les Actualités Médicales*. Dementia præcox is now generally recognised as a definite clinical group of mental diseases, and the authors treat of the group under three headings : (1) the form of hebephrenia or mania ; (2) the form of katatonia or stupor ; (3) the form of paranoia.

The authors recognise the first form as the most common, affecting the character, the moral sentiments, and the intellect generally. The clinical pictures are presented with much skill and sincerity, and the illustrations are very helpful and characteristic. Following the usual clear-headed methods of French writers, the whole of the questions relative to the disorders considered are worked out precisely and briefly—yet not so briefly as to obscure the authors' meaning. They confirm previous observers in stating that dementia præcox is slightly more common in the male sex, and that they find about 70 *per cent.* of the cases have an hereditary history of insanity. The results of organo-therapy would seem to leave the authors in doubt as to its efficacy. They note that passive gymnastics are indicated in katatonia, and lay stress on moral influences. We commend this work as a concise history and practical handbook in relation to this group of maladies.

Part III.—Epitome of Current Literature.

1. Anthropology.

Anthropometric Variations due to Sex and Height [*L'homme moyen à Paris*]. (Bull. Soc. d'Anth. de Paris, 1902, fasc. 4.) Papillault, G.

THE appearance of this valuable memoir can be only briefly noted. It is one of the most important contributions to an exact knowledge of the body—the proportions of head, trunk, and limbs—which has been made during recent years. Dr. Papillault, who belongs to the school of Manouvrier, and is a teacher at the Paris Laboratory of Anthropology,

carefully measured, in accordance with the best technical methods, two hundred bodies (one hundred of each sex) belonging to the anatomical department. They were all French, between the ages of 24 and 50, and markedly pathological cases were excluded. The author discusses his results with much ability and with a wide knowledge of the literature. He clearly shows that the differences between men and women, like those between the infant and the adult, may largely be explained as due simply to differences in size. In addition to secondary sexual characters, he adopts the conception of tertiary sexual characters as brought forward by the present writer, but appears to consider his own definition of such characters as new and distinct; while possibly more precise, it remains, however, practically the same. HAVELOCK ELLIS.

Considerations on Infantilism, etc. [*Considerazioni antropologiche sull'infantilismo, etc.*]. (*Monitore Zoologico Italiano*, 1903, Nos. 4—5.)
Giuffrida-Ruggeri.

The author, who is one of the ablest of the younger Italian anthropologists, here brings together various facts and considerations bearing on infantilism, the significance of sexual differences, and the question of the origin of human varieties—to some extent founding his paper on the recent elaborate researches of Manouvrier, Godin, and Papillault.

Infantilism may be defined as an arrest of development between the ages of thirteen and sixteen, not necessarily accompanied by any decreased growth in mere size; owing to this arrest, however, whatever the increase in size, the relative proportions of the body retain the same youthful ratio as they possessed before the arrest took place. The presence of such arrest may be shown by various indications. The author refers, for instance, to the relative height of the nipple and the lower extremity of the body of the sternum: in the child the nipple is considerably higher in relation to the extremity of the sternum; in the adult the difference is only a few millimetres. A relatively high nipple may thus be regarded as an anthropometric stigma of infantilism. It has been asserted that the relative height of the upper borders of the symphysis pubis and of the great trochanter furnishes a similar indication, the first being lower in the child, and the two points nearly level in the adult; this, however, while asserted by Godin, is denied by Papillault. Another infantile characteristic is the proportionately greater length of the lower limbs as compared to the trunk; until the age of fifteen, Godin found, increase of height is mainly due to the lower limbs, afterwards to the trunk. This, however, is not true of women.

At this point the author passes on to a theme which he has often dealt with, the supposed infantilism of women. He proceeds to bring forward a number of facts and arguments showing that, while there may be in women either sexual divergence from men, or equality, there is no evidence for morphological inferiority. It must be pointed out, however, that the author has here been somewhat carried away by his favourite thesis, and has fallen into a confusion of terms. Although at one point he recognises that "inferiority" and "infantilism" are perfectly distinct, he writes on the whole as though they were identical.

The distinction is important, because, so far from being identical, they may even be opposed. A large brain is not a sign of inferiority, since a progressively larger brain marks advance in zoological rank; but it is an infantile characteristic. In the same way many human characteristics mark the young ape, but are lost in the adult; they are in the ape infantile, but we cannot call them inferior. This confusion somewhat vitiates Dr. Giuffrida-Ruggeri's otherwise excellent argument. He warmly repels the statement that women are morphologically inferior, but he fails to see that in asserting unconditionally that women show no signs of infantilism he may have become an unconscious advocate of the inferiority of women.

The infantilism of the lower races is then discussed, and the author points out that in dealing with such races the infantilism they exhibit is rather comparative than real, and that we must distinguish between the pathological infantilism found in the isolated individual of a higher race, and the infantilism "in a philosophic sense" which we may trace in various races of savages.

In a subsequent study on "the plasticity of human varieties," the author discusses the question whether, or in what degree, the skull form is capable of modification. It is a point on which anthropologists are by no means agreed; some consider that the skull shape of a race may be indefinitely modified, others that it never changes and that intermixture can only lead to the production of the two varieties side by side, failing to produce any intermediate forms. Starting from this last standpoint, the author considers that it is no longer possible to retain it quite absolutely. He brings forward more especially the case of Italy. The northern half of the peninsula is brachycephalic, the southern half dolichocephalic, but at the point of junction the mesocephals prevail; this phenomenon is considered to be best explained by supposing a mixture of the two races with tendency to convergence of the opposed head shapes, in harmony with the conclusions of Nyström in Germany, according to which the children of parents with unlike cephalic indices themselves in the majority of cases have unlike indices, but that in a small number of cases they show an intermediate index. The cranial invariability asserted by Sergi, Kollmann, etc., must not therefore be understood in too strict a sense; this invariability tends to persist, but mixture produces a gradual modifying influence.

HAVELOCK ELLIS.

Artificial Deformity of the Skull [*Les déformations artificielles du crâne en France*]. (Bull. Soc. d'Anth. de Paris, 1902, fasc. 2.) Delisle, F.

Dr. Delisle has for many years been an authority on this subject, and in the present monograph he treats it in a more exhaustive manner than he has hitherto done, and also presents a map showing the distribution of deformity in the various departments of France. Although the practice is slowly dying out, it still persists to a surprising extent, and may be found, the author remarks, in many Parisians of intellectual distinction. It is least prevalent in the eastern third of France. The author concludes that it shows no tendency to become hereditarily impressed on the race, and that there is no sufficient evidence to

support the belief that any arrest of physical or mental development is caused by the practice, or that the individuals subjected to it show any unusual tendency to insanity.

HAVELOCK ELLIS.

*Physical Anthropology of the Jews. (American Anthropologist, 1902-3.)
Fishberg, Maurice.*

Dr. Fishberg, of New York, is publishing a valuable series of studies of Jewish anthropology, and of these the first two, dealing with the cephalic index and with pigmentation, have already appeared. America is a good field for the study of Jews, on account of the large number now reaching its shores from very various parts of Europe; and the study is one of considerable interest, as it is calculated to throw light on various important problems of general anthropology.

The cephalic index among 500 Jews was found to be, taking the arithmetical average, 82.12, or, taking the median, 81.77, coming, therefore, in the sub-brachycephalic class. In order to ascertain whether his results show a homogeneous or a heterogeneous race, the author arranges them in a curve; it then appears clearly that this curve has but a single definite apex corresponding to the average and the median, and the conclusion becomes probable that the Jews are an unmixed race—unmixed, indeed, it would seem, to a degree not found in any other civilised race. The Jews are usually looked upon as Semites; the other Semites are, however, mainly dolichocephalic, and Fishberg seems to incline to the opinion of Luschan and others, according to which there was originally a large Armenian element among the Jews.

Pigmentation is the subject of the second study. The results here obtained do not altogether accord with those reached in the study of the cephalic index. There is much more evidence of mixture of race. While 56 *per cent.* were of brunette type, having both hair and eyes dark, 12 *per cent.* showed blonde hair combined with blue eyes. Fishberg is inclined to attribute this, it would seem, in part to the blending of races which there is some reason to believe took place at an early period in Jewish history, and in part to modern intermarriage. If this is the case, we have to suppose that the mixture of race has been effective in influencing pigmentation, but has not succeeded in influencing head form. It may be added that this apparent discrepancy possibly gives force to an argument of Giuffrida-Ruggeri, who in discussing Fishberg's conclusions is inclined to attribute the presence of a single apex in the curve of the Jewish cephalic index not to unity of race, but to a phenomenon of convergence by which opposing head shapes have slowly merged into a predominance of the intermediate sub-brachycephalic form. In either case, however, some discrepancy would remain between head form and pigmentation.

HAVELOCK ELLIS.

A Consideration of Labour among Primitive People. (Glas. Med. Journ., June, 1903.) Jardine.

In this inaugural address, Professor Jardine gives a short sketch of some of the beliefs and usages prevalent amongst uncivilised peoples with regard to parturition, dealing with the matter mainly from the

standpoint of the practical obstetrician. He points out that many of the methods adopted by primitive races are superior to those in vogue in civilised communities. For instance, the squatting posture for delivery customary with a good many savage races is much more rational than the conventional attitudes assumed by cultured European women. Similarly, he would attribute the comparative rarity of uterine diseases in savage life, in part at least, to the precautionary customs which grow out of the idea of uncleanness during menstruation.

W. C. SULLIVAN.

2. Neurology.

Electrical Resistance and Muscular Contraction before and after the Epileptic Fit [*Resistenza elettrica e contrazione muscolare avanti e dopo l'accesso epilettico*]. (*Il Manicomio, anno xix, No. 1.*) Alessi.

After the epileptic fit, several functions of the organism are found to be more or less modified; this has been noted, for instance, in respect of the mental state, the body-weight, the temperature, the blood, the urine. From a consideration of these facts the author was led to the inquiries recorded in this paper. He investigated the effect of the fit as regards three points: (1) resistance to the passage of the galvanic current; (2) the minimum current that will produce a muscular contraction; and (3) the character of the contraction recorded graphically. The experiments, which were made on sixteen epileptics, were carried out with minute precautions to secure that the conditions should be as far as possible identical; and note was taken in each case of the atmospheric state as regards moisture, pressure, and temperature. Verdin's myograph was employed, and the biceps of the left arm was selected for stimulation. Notes of each case are given, and the results are summarised in tabular form.

The conclusions drawn by the author are as follows:

1. In all the epileptics examined the electrical resistance was higher, and the current required to cause muscular contraction was stronger than in non-epileptics.

2. After a fit the electrical resistance was increased and the muscular sensibility diminished.

3. But in those epileptics whose fits were followed by phases of mental excitement there was, on the contrary, a lowering of electrical resistance and an increase of muscular excitability.

4. The curve of muscular contraction taken after the fit differed from that taken before in being irregular and lower; the strength of current that gave ACC before the fit hardly ever gave it in the post-epileptic phase.

W. C. SULLIVAN.

Specific Autocytotoxins and Anti-autocytotoxins in Epilepsy [*Autocitotossine e anti-autocitotossine specifiche degli epilettici*]. (*Riv. speriment. di Freniatr., vol. xxix, fasc. 1, 2, 1903.*) Ceni.

In this preliminary note, Ceni states shortly the results of further experiments which he has undertaken in the investigation of the

properties of the blood-serum in epilepsy. His earlier researches, which have been reported in the JOURNAL, led him to the view that the serum of the epileptic contained two active principles—roughly speaking, a toxin and an antitoxin,—and that the inconstancy of the effects of serum injections was due to the opposite properties of these principles. In the inquiries which he now describes he subjected guinea-pigs to a course of injections with epileptic serum, and then injected the serum of these vaccinated animals into a number of epileptics. As a constant result the patients showed phenomena of reaction, local and general, the latter being of a clearly specific sort, *viz.*, rise of temperature with a characteristic state of mental confusion—an epileptic psychosis, often with increased frequency of motor attacks. On the other hand, normal blood-serum of guinea-pigs injected into epileptic patients gave rise to no such specific reaction; and the serum of guinea-pigs previously treated with non-epileptic serum was almost equally inert. Further, the serum which gave characteristic results with epileptics had practically no effect on non-epileptic patients.

The inference, therefore, is that the serum of epileptics injected into the guinea-pig is capable of determining in that animal a product of organic reaction with a specifically toxic action to which epileptics alone are susceptible. Assuming, then, for the cytotoxin of epilepsy a constitution similar to that assigned by Metchnikoff and others to cytotoxins in general, it would contain a thermolabile alexin incorporated in the leucocytes, and only set free by phagolysis; and a thermostable body, also of leucocytic origin, but capable of entering into the circulation. In epilepsy, therefore, the hypothesis supposes that a morbid tendency to phagolysis exists in the related nervous elements, and that thereby quantities of alexin are liberated which act on the cortical cells rendered hypersensitive by the thermostable substance.

Now, since the serum of the vaccinated guinea-pigs acts only on epileptic subjects, the cytotoxin which it contains must be analogous to the thermostable substance and not to the alexin. To confirm this view Ceni, in a further series of experiments, injected this serum after submitting it to a temperature of 56° C., with the anticipated result that its toxic action was unaffected. It is to be concluded, therefore, that the phenomena of specific reaction produced in an epileptic by the injection of serum from another epileptic, or from a guinea-pig treated with epileptic serum are due not to a further dose of alexin, but to the thermostable substance which renders the nerve-cells more sensitive to the alexin already circulating in the epileptic subject.

To show the existence of the supposed anticytotoxin in epileptic blood, Ceni resorted to the method of mixing normal epileptic serum with a toxic dose of serum from a vaccinated guinea-pig, and injecting it into epileptic patients. The result was that in the great majority of cases the action of the guinea-pig serum was largely or wholly neutralising. This effect was not, however, obtained in all the cases. But in a second series of experiments, in each of which the diluting agent was the serum of the individual patient who received the injection, the neutralising action was found to be constant. The author concludes, therefore, that while the thermostable substance in the autocytoxin is capable of influencing all epileptics, the antitoxin has a much more specific

and individual action, being more effective for the organism which has elaborated it.

The details of the experiments on which these ingenious views are based will be awaited with interest.

W. C. SULLIVAN.

3. Physiological Psychology.

Mental and Moral Heredity in Royalty. (Popular Science Monthly, August, 1902—April, 1903.) Woods, F. A.

Dr. Woods, of Harvard, has in this interesting series of papers made a careful study of an old problem—the heredity of mental and moral characters, including insanity, in royal families. He deals with all the chief royal families of modern Europe in succession, using the copious material contained in Lehr's *Genealogy* and applying to it some of the methods of Galton. His main general conclusion emphasises the influence of heredity as against environment. On the intellectual side he considers that heredity accounts for nearly nine tenths of the phenomena, on the moral side for rather more than one half. Variations in the offspring are found associated with corresponding variations in the ancestry, so that when good and bad blood is mixed the children tend to show corresponding deviations in both directions, although they may be all bred in the same environment. There is found to be a slight, but only a slight, relationship between genius and insanity.

HAVELOCK ELLIS.

4. Etiology of Insanity.

The Geographical Distribution of Insanity in the United States. (Journ. of Nerv. and Ment. Dis., May, 1903.) White, W. A.

When invited by the National Geographical Society to address them on this subject, the author states that he had vague notions of the possibility of formulating laws that would express the relationship between insanity and latitude and longitude, temperature, precipitation, etc., after a diligent study of statistics. Confronted at the outset by the fact that the proportion of insanity varies greatly in different regions of the United States, what more natural, he asks, than that any scientific man not especially acquainted with the statistical study of sociological phenomena should ascribe such variations directly to the difference in man's physical environment in these localities?

He then proceeds to explain why he found it impossible to present such laws as he originally dreamed of, clothed in mathematical formulæ and demonstrating beyond doubt the precise effects of each climatic and geographical factor upon the prevalence of mental disease.

The social organism (he says) is so extremely complex that any effort

to reason from the association of two or more conditions to the probable causative relations between them is always dangerous, and when figures are suborned for such purposes the results are notoriously inaccurate.

In this address, it is his object to inquire whether the prevalence of insanity in the various regions can be shown to have any definite relation to any one or more environmental conditions; whether insanity is more prevalent at certain elevations above sea level, or between certain degrees of latitude; whether it prevails more especially in regions of a certain average temperature and barometric pressure, or, on the other hand, where the mean humidity is high or low; and further, if these conditions cannot be shown to have a causative effect upon its distribution, what has?

He then starts his inquiry by a study of a map of the United States, upon each state or territory of which the ratio of insane to 100,000 population is indicated in accordance with the census returns for 1880; and comes to the general conclusion that the variation in the proportion of insanity in the different states is regular and uniform, while both geographic and climatic conditions are not, but, on the contrary, differ greatly in different parts of the United States—as, for instance, in the region of the Great Lakes. If, therefore, we would explain these figures, we must seek a cause as uniform as its effects. This cause, or more properly, these causes, are the same causes that make for civilisation; the same that make for permanency and organisation of social institutions; the same that make for concentration of population in great cities; the same, in short, that make for progress in its broadest sense.

He does not wish to convey the idea that climate has no influence on conduct, believing that Dexter has clearly shown that it has; but he thinks with Berkley that climate and seasons have little to do with the evolution of insanity. The effects of man's physical environment upon his mind must be only secondary—mediate, not immediate. If we study, for example, the effects of temperature, humidity, or altitude, we find them expressed in terms of respiration, pulse-rate, evaporation from the cutaneous surface, blood-pressure, etc.—effects which he grants are potent, but which nevertheless are not primarily mental. Therefore, if we are to seek for adequate causes to explain the conditions which he has pointed out, we must seek for mental, not physical causes.

If we look back over organic nature we shall see that, in the progress of evolution, the nervous system has come to play a progressively more and more important part until we get to the higher animals, the vertebrates, in which the brain comes to be of paramount importance. The brain of civilised man has, as it were, become the storm-centre of the organism.

Thus far, in his attempt to account for the geographical distribution of insanity in the United States, he has discarded the influences of the physical environment as being efficient causes, because of their indirectness; and has appealed to the immediate results of mental stress, the results of the contact of man with man in the struggle for existence—in short, the results of that struggle itself as exemplified in civilisation.

He then proceeds to show in great detail how this contention is borne out by facts, showing that insanity is most prevalent in those localities where civilisation is furthest advanced, where the social institutions are

stable, where class distinctions have crystallised—in short, where the stress of intellectual life is greatest.

The author also brings forward much collateral evidence along the lines of suicide, pauperism (but, strangely, does not refer to criminality in this connection), insanity among the negro population, etc., in proof of his conclusion that the proportion of insanity is highest where we find the greatest congestion of population, and, therefore, where the stresses incident to active competition are most severe.

Finally, he enters into a discussion of causes of insanity with a view to indicating some general conclusions relative to the comparative influence of the mental stresses to which he has referred in the actual production of insanity. He rightly holds that the true underlying condition, in all cases where a so-called exciting cause (such as domestic trouble, business worry, loss of relations or friends, etc.) is given to account for a person's alienation, is the predisposition to insanity. This may be either inherited or acquired. By the former he indicates hereditary insanity, by the latter that brought about by alcohol and syphilis. Of all the causes of insanity, heredity is recognised as being by far the most important and as being most frequently present. Alcohol and syphilis act as true exciting causes of insanity at times. It is conceded that both of these causes are much more prevalent in civilised communities, and, in fact, seem to be fostered by that irregular life which the active struggle after wealth necessitates.

In conclusion the author says, while civilisation furnishes the environment that makes a bad heredity doubly dangerous, still it is the heredity which is the prepotent factor, and not the environment. A bad heritage is always a source of danger, and its possessor can never know when the environmental conditions may appear which will make its latent activity kinetic.

A. W. WILCOX.

Tabes and Marriage: a Study of the Fertility of Tabetics and the Future of their Offspring [Tabes et Mariage: Étude sur la fécondité des tabétiques et l'avenir de leur descendance]. (Journ. de Méd. de Bordeaux, July 12th, 1903.) Pitres.

The author has analysed 240 cases of tabes with a view to determining the influence of the disease on the fertility of the patients and on the vitality of their children.

Of the 240 individuals, 209 (87 *per cent.*) were married, this being a proportion considerably higher than in the general population. This greater frequency of tabes in the married has been noted by other observers. Of the 209 patients (148 men and 61 women) married to non-tabetics, 42 (20 *per cent.*) were absolutely sterile; 32 (15 *per cent.*) had 67 children, who all either were dead-born (46 cases) or died in infancy (21 cases); the remaining 135 (65 *per cent.*) had 416 children, of whom 130 were dead-born or died in infancy, while 216 (2·11 *per family*) lived beyond childhood. Absolute or relative sterility was much more marked in the female tabetics than in the male.

The high infantile mortality—197 out of 483 (40·7 *per cent.*)—could not, however, be attributed to tabes. For of these 483 children the 393 which were born before the first evidence of the spinal disease showed

a mortality of 44 *per cent.* (23 *per cent.* stillborn and 21 *per cent.* dead in infancy), while the 90 born after the definite appearance of tabetic symptoms had a mortality of only 28 *per cent.* (12 *per cent.* dead-born and 16 *per cent.* dead in childhood). The cause of the low vitality of the offspring was therefore operative before the development of tabes; and since in the majority of cases of that disease syphilis is an antecedent, it suggests itself at once that the syphilitic infection may be the cause of the high infant death-rate. And this idea is borne out by further inquiry. Thus the mortality in the children of fathers who were certainly syphilitic was found to be 33 *per cent.*, while in the children of possibly non-syphilitic paternity it was only 20 *per cent.*

Nothing abnormal was noted in the children of tabetic parentage who lived beyond childhood. With few exceptions they were mentally and physically quite sound.

W. C. SULLIVAN.

5. Clinical Neurology and Psychiatry.

On Heredity and some Clinical Symptoms in Relation to the Genesis and Pathology of Feeble-mindedness [Dell' eredità e di alcuni sintomi clinici in rapporto alla patogenesi nelle frenastenie (con tabelle dimostrative)]. (*Ann. di Freniatr., Giugno, 1903.*) Pellizzi, G. B.

In a paper of thirty-nine pages, Dr. Pellizzi considers the attempts which have been recently made to square the clinical symptoms of idiocy with the pathological alterations already noted. There are some forms in which during life the pathological lesions cannot be presumed or guessed; these forms he calls degenerative, genetous, evolved, or common idiocy. In other cases, there are definite symptoms indicating a precise lesion, such as infantile hemiplegia, diplegia, and other paralyzes which have been well described by Tanzi. König has put the question, are idiocy and cerebroplegia not the same thing? But this Pellizzi justly thinks is going too far. We have found the congenital forms of idiocy much commoner than the acquired forms, though it need not be disputed that further research will tend to reduce the number of the former. In the cases analysed, Pellizzi found a proportion of 52 *per cent.* of the evolved form (*evolutiva*) and 32 *per cent.* of the pathological; the rest were doubtful. Pellizzi has most carefully studied forty selected cases, which are tabulated and analysed, having in view their physical and mental condition and their capacity for receiving education. He has found neurotic heredity in the cerebroplegic cases, though not so frequent as in cases of born idiocy. As one result, he has arrived at the conclusion that infantile spastic diplegia may be the result of the arrest of development. Besides his original investigations, which have been prosecuted with great diligence, there are two pages at the end of the article filled with references to contributions upon the pathology of idiocy in many European languages, which shows that the subject of idiocy is at present receiving considerable attention from pathologists.

The following passage gives the most recent results concerning these curious forms of amaurotic idiocy observed in New York, principally

amongst children of Jewish origin. B. Sachs, in 1896, published the first cases; others were described by Tay-Sachs, Kingdon, Carter, Magnus, Wadsworth, Goldzieher, Hirschberg, and Stars. In these cases flaccid paralysis and spastic paralysis appeared in almost equal proportions.

The anatomical and microscopical studies of Sachs and Kingdon exclude the existence of a pathological process. There was no proliferation of the neuroglia, nor traces of inflammatory processes, nor alteration of the vessels and membranes of the brain. We have here to do with a true agenesis of the cerebral cortex, as shown by imperfect differentiations of the layers of the cortex, and embryonic character of the nerve-cells, and anomalous appearance of the pyramidal layer. Further chemical observations have been made by Falkenheim, Frey, Hirsch, Kuh, Higier, and Patrick; and the anatomical and microscopical investigations of Sachs have been confirmed by Russell, Peterson, Frey, and Hirsch.

From the cases of amaurotic idiocy it appears that all the muscles, including those of the trunk, neck, and head, may be affected with paralysis or contraction; the morbid process goes on with more or less rapidity, seizing upon one side or one limb after another. The paralysis may be spastic or flaccid, total or partial hemiparesis or paraparesis, and the flexors and extensors of the limbs may be more or less rigidly contracted.

WILLIAM W. IRELAND.

On the Diagnostic Value of Irregularities of the Pupil [Ueber den diagnostischen Werth der Unregelmässigkeiten des Pupillarrandes bei den sogen organischen Nervenkrankheiten]. (Neurologisches Centralblatt, Juli u. Aug., 1903.) Piltz, J.

In these two numbers of the *Centralblatt* Dr. Piltz gives the results of a very careful study of the irregularities of the pupil in nervous diseases. Half a century ago, the frequency of this symptom in general paralysis was noted by Baillarger; since then many observations have been made by physicians upon the state of the pupil in insanity. Many of these have been cited by Dr. Piltz in the good old German way of reviewing the whole state of our knowledge of the subject before giving us the result of his clinical observations and experiments upon animals. The articles are illustrated by some instructive engravings giving the varying shapes of the pupils and the anatomical distribution of the nerves of the iris.

Dr. Piltz thus sums up the result of his clinical observations and experimental researches:

1. There are temporary or shifting irregularities which are caused by unequal movements of portions of the iris.
2. By disturbances in the position of the whole pupil.
3. By persistent irregularities of the edge of the pupil. All these pathological alterations in the edge of the pupil are common in general paralysis, tabes dorsalis, and lues cerebro-spinalis.

They are often observed in the course of other mental diseases; rarely in healthy people.

4. Shifting disturbances and unequal motions of the iris are sometimes observed in katatony.

5. Irregular shapes of the edges of the iris are often observed before the appearance of the Argyll-Robertson symptom, and have thus much importance in diagnosis.

6. Alterations in the form of the pupil, similar to those observed in disease, may be produced experimentally; hence we may suppose that these changes signify an irritation, paresis, or paralysis of portions of the iris dependent upon pathological affections of the short and long ciliary nerves and their nuclei.

7. Unequal reactions of single portions of the iris are dependent upon paresis of the corresponding branches of the ciliary nerves—paresis iridis partialis.

8. Disturbances of the position of the whole pupil indicate a combined irritation, paresis, or paralysis of the branches of the short and long ciliary nerves.

9. Constant irregularities of the whole pupil constitute a sign of paralysis of some section of the iris—iridoplegia partialis.

These are most probably the result of diseased conditions of the ciliary nerves or their nuclei (atrophy of nerve-cells).

WILLIAM W. IRELAND.

Delirium in Febrile Conditions. (*Dub. Journ. of Med. Sci.*, June, 1903.)
Jones, K. W.

The author of this thesis, in speaking of delirium or febrile insanity and post-febrile insanity, says that the latter is a very rare condition, and is, generally speaking, incurable, as it is not due to the wasting and exhaustion alone, but that the specific poison of the fever is a factor in its causation. The former he classifies into simple delirium, the so-called busy delirium, delirium ferox, and low-muttering delirium. He observes that febrile insanity is most common in typhus fever (and is generally so, as in all fevers, in the male sex), then in smallpox, enteric fever, pneumonia, and erysipelas. In scarlet fever and measles it is rare. In the treatment of simple and low-muttering delirium he has found paraldehyde the most useful hypnotic. In busy delirium and delirium ferox all the ordinary hypnotics, in his experience, were practically useless. The one drug which he found to act was apomorphin in $\frac{1}{16}$ gr. doses to adults. In Dr. Jones's hands this drug had a hypnotic but no emetic effect, but he does not tell us in how many cases he obtained this result, nor as to the mode of its administration. He found—by chance, he says—that it acted better when given about ten minutes after a hypodermic of $\frac{1}{4}$ gr. morphin. A. W. WILCOX.

Psycho-motor Hallucinations and Double Personality in a case of Paranoia.
(*Journ. of Nerv. and Ment. Dis.*, May, 1903.) Pickett, W.

In this article, the author describes an interesting case of paranoia which has been under his care for some years. The patient is a German, 35 years of age on admission, a boiler-maker by trade. His

family history is unknown. Three years before admission he had received a blow on the head from a falling log. Two years later he began to complain of pain in the head, heard vague sounds continually, was sleepless, restless, and had fears of harm and misfortune. He had a number of outbreaks of excitement, during which he would destroy the furniture of his house. He explained to his wife that these were due to "nervousness," and advised her to keep out of his way lest he might harm her. He then developed a fixed delusion that certain of his fellow-workmen at the shipyard where he had been employed were "robbing him of a patent on a ship" which he had devised but "was too poor to put through."

This delusion was the prominent feature of his case on admission, and has persisted, though now overshadowed by the notions about to be described.

Two years after admission it was observed that he was continually uttering, in a mechanical way, certain strange expressions, the one that most frequently occurred sounding like "Boon knecht." When asked what this meant he replied, "I don't know;" why he said it, "I don't say it." Urged to explain, the patient insisted, "I do not say these words, but the man on my back says them." He added that this man on his back does various things with his (the patient's) body, moving his arms, as well as his lips and other organs of speech. Recently he has gone so far as to set aside a portion of his meals regularly for the nourishment of this imaginary host (*sic*) on his back.

This patient, the author believes, is one whom certain French writers (Séglas and Ballet, to wit) would describe as suffering from verbal psycho-motor hallucination with "doubling of the personality." He then gives the explanation of these authors as to what they understand by these two terms.

Briefly stated, a psycho-motor hallucination is due to the excitation of a cortical motor centre exactly as a psycho-sensory or ordinary hallucination is due to excitation of a sensory one.

Their explanation of "double personality" is that as in an ordinary (sensory) hallucination, such as of hearing, the voices, etc., are promptly "exteriorised," *i. e.*, ascribed to outside agencies, etc., so in a psycho-motor the hallucination impresses the patient as being due to a mysterious agency within himself; and so in time he forms the conception of a new strange being inhabiting his body or in intimate association with his body. This is exemplified in the author's patient with "a man on his back."

The term "double personality" is unfortunate, since it has been employed as a synonym for "double consciousness" in the sense of alternating consciousness. Pickett suggests the term "accessory personality" in its stead.

He then deals at considerable length with the literature on the subject of this article, and arrives at the conclusion that we may accept the theory of psycho-motor hallucinations by reason of its plausibility; that psycho-motor hallucinations are not so rare as we have supposed; that double personality, however, is a very rare sequence of them, and when it is present it is an accidental conception born of ordinary processes of reasoning over strange sensations.

He concludes by mentioning a case of his own, in which both verbal and common-motor hallucinations, present in abundance, were ascribed by the patient to outside agencies, and believes that psycho-motor hallucinations are often thus exteriorised.

A. W. WILCOX.

Mirror Writing [La scrittura speculare]. (Il Manicomio, anno xix, No. 1.) Tomasini.

In this paper, the author records rather summarily a clinical observation of mirror writing, and in connection therewith gives a short critical review of the literature of the subject.

The observation referred to a patient æt. 23, an hereditary degenerate suffering from cocaine insanity characterised chiefly by mental debility without much sensory disturbance. He was a person of superior education, and at the time of his illness was a student of law. His aptitude for mirror writing was discovered accidentally just before his discharge from the asylum; he was trying for amusement to write with the left hand, and, after some unsuccessful efforts to produce the letters in the ordinary manner, he suddenly and in an apparently involuntary way began to trace the lines well and rapidly in mirror writing. He was positive that he had never written in that fashion before. He was neither left-handed nor ambidextrous in respect of any fine movements. A *fac-simile* of his mirror writing given in the paper shows a clear facile hand differing somewhat from his ordinary caligraphy.

The author points out that the sudden manifestation of this aptitude in a right-handed adult not suffering from any functional incapacity of the right hand is rather rare. The phenomenon has been more often met with in hemiplegia with some degree of dementia, in left-handed persons and in children. To explain its occurrence in cases such as that which he records, the author supposes that Exner's graphic centre is represented in both hemispheres, but that normally the left centre is dominant; when for any reason—in this case the paralysing effect of the intoxication—the left hemisphere has lost its functional supremacy, the right graphic centre may come into play. In this way, if, as Abt has pointed out, there are no impeding conditions—*e. g.*, too vivid visual images of the letters to be traced,—mirror writing may result, since the abduction movements which it involves are the true homologues for the left hand of the motions of the right hand in ordinary writing.

W. C. SULLIVAN.

6. Pathology of Insanity.

On the Alterations in the Nerve-fibres of the Spinal Cord and the Spinal Ganglia in some Forms of Chronic Insanity [Sulle alterazioni delle fibre nervose spinali e dei gangli intervertebrali in alcune forme di psicosi croniche]. (Ann. di Freniatr., Giugno, 1903.) Burzio.

Dr. Burzio has made a laborious investigation of the state of the spinal cord in fifteen cases, which include imbecility, epileptic

insanity or idiocy, primary dementia, melancholia, senile insanity, and secondary dementia. He has not made a special study of the cord in general paralysis and pellagrous insanity, as this has been already carefully examined. In the beginning of his contribution Dr. Burzio cites the previous observations of Stewart, Feist, Mondio, and Petrazzani. In his important work "On the Anatomical and Pathological Differences between Primary and Secondary Degenerations of the Nervous Centres," which appeared in the *Rivista Sperimentale di Freniatria*, vol. xxi, 1896, p. 788, Vassale has shown the general characters of degeneration of the spinal cord in dementia, and admitted their primary nature. After detailing his methods of investigation and preparation, Dr. Burzio describes his fifteen observations. In three of these, two cases of melancholia and one of senile insanity, no lesions were found in the spinal cord; in the others some alterations were found, the most common being degeneration of Goll's tract (eleven times), occasionally combined with degeneration of the crossed pyramidal tract (three times). Hypertrophy of the neuroglia was rare. Degeneration of the nerve-cells of the spinal ganglia was also frequently met with. These alterations in the nerve-fibre of the spinal cord and of the spinal ganglia were sometimes associated with atrophy of the cerebral convolutions and of the cells of the grey substance of the spinal cord, and were often accompanied by a diseased condition of the liver, kidneys, and spleen.

Vassale has laid down that in secondary degenerations there occurs a destructive process, both in the medullary sheath and in the axis-cylinders, which soon leads to a total disappearance of the nerve-fibre; while in the primary degeneration there is a gradual disappearance of the myelin, while the axis-cylinder persists for a much longer time. As the result of his operations Burzio concludes that the degenerations he has noted in the spinal cord of the chronic insane are primary simple atrophies. His view is confirmed by some destructive lesions practised upon dogs. Burzio also finds these lesions analogous to those observed in pellagra, and after intoxication with some drugs and bacteria. This, he thinks, confirms the hypothesis of the toxic origin of the insanities. He regards the degenerations observed in the liver, kidneys, and aorta as further proofs of the action of a toxin within the system.

WILLIAM W. IRELAND.

The Pericellular Nerve-mesh in the Cortex [*L'intreccio nervoso pericellulare nella corteccia cerebrale*]. (*Ann. di Freniatr. Giugno, 1903. Roncoroni.*)

Entirely distinct from the radiating and tangential fibres of the cortex cerebri Professor Roncoroni describes a mesh of very fine fibrils surrounding the nerve-cells and their protoplasmic prolongations, and sometimes winding over from one neuron to another.

Nissl admits the existence of a continuous fine net of elementary fibres which unites all the nerve-cells in the grey substance of the brain. The fibrils described by Roncoroni are also to be found in the white substance and in the medulla, pons, and crura cerebri, though less abundantly. They are scarce in the olfactory bodies, and cannot be traced in the cerebellum, in the retina, or in the ganglia of the sympa-

thetic. No traces of myelin could be detected around the fibrils. Roncoroni has found them in some of the lower animals. He thinks that these fibrils have a nervous or psychical function; but this does not go beyond speculation.

WILLIAM W. IRELAND.

The Changes found in the Central Nervous System in a case of Rabies with Acute Mental Disturbance. (Journ. of Nerv. and Ment. Dis., May, 1903.) Allen, C. L.

Before proceeding to a description of the case which came under his personal observation, the author gives a *résumé* of the literature on the subject of the pathological anatomy of rabies.

This case was that of a farm labourer æt. 32, who, whilst intoxicated, was bitten on the hand by a dog. The dog was said to be mad, and killed, but no examination of its body was made. The man, who was the subject of much attention and interest on the part of his neighbours, who repeatedly detailed the symptoms of rabies to him, became nervous and depressed, gave up work, and began to drink heavily. About three months after receiving the bite he became excited and violent, tore his clothes, is said to have "barked like a dog," was unable to swallow, and took neither food nor drink from that time onwards. He was brought into hospital, tied hand and foot, three days later. He was then very restless and excited, kept constantly in motion, secreted a great quantity of saliva, and was absolutely unable to swallow. Apparently he had no definite delusions, hallucinations, or illusions, and in an interval of comparative calm told the attendant that he had hydrophobia and hated to die. The patient died the same evening.

On account of the questionable history the case was regarded as being most probably one of acute excitement supervening upon alcoholism.

The autopsy was performed seventeen and a half hours after death. Two rabbits were inoculated with portions of the brain and spinal cord, with the result that each animal developed typical paralysis of the hind limbs and died three days later, after the paralysis had ascended to the fore limbs.

The writer then gives a detailed account of the macroscopic and microscopic findings, which agreed in general with those which have previously been described in rabies, but which he thinks, while strongly suggestive in a case with so suspicious a history, would hardly have justified a positive diagnosis if taken alone, *i. e.*, without the animal inoculations. None of the changes found were characteristic of rabies alone, but each may be present also in other diseases.

From the study of the literature of the subject, together with that of this case, the author believes that it is justifiable to conclude that neither the ganglionic changes of van Gehuchten and Nélis nor the rabies tubercle of Babes are absolutely characteristic of human rabies, though their presence in a suspicious case may be of considerable diagnostic importance. The value of these changes in the nervous system of a dog suspected of rabies is not yet entirely decided, but when found in a case otherwise suspicious they are at least strongly

suggestive, and they should invariably be sought for, at any rate until we acquire some more definite information upon the subject.

A. W. WILCOX.

7. Treatment of Insanity.

Saline Injections in the Treatment of the Psychoses [Kochsalzinfusionen in der Therapie der Psychosen]. (Psychiatr. Neurol. Wochenschr.) Wickel.

Dr. Wickel draws attention to the continually increasing field of application of subcutaneous saline injections which has been noted within the last twenty years. This development has taken place in the various departments of medicine, surgery, and gynaecology, and, within the last twelve years, it has invaded also that of mental disorders.

The reasonableness of this method of treatment is quite obvious in all forms of acute anæmia from loss of blood. In shock and collapse its applicability is equally apparent. In the profound prostration of cholera (Asiatica and nostras) it is held to serve a double purpose—on the one hand by filling the depleted vascular system, and on the other by diluting the percentage strength of the toxins in the system and facilitating their elimination; in the latter action the improved circulation would be a factor.

On the strength of this point of view, the dilution of the poison by the injection, the latter has been employed in various forms of poisoning, infectious and other, including carbonic oxide and coal-gas poisoning; also in uræmia, diabetic coma, eclampsia, the typhoid state, septicæmia, etc. It has likewise been used in pneumonia, malignant endocarditis, and in the primary (essential) anæmias.

From 1891 on we find records of the use of saline injections in acute delirium with prostration (Mercklin); in mental disease with collapse and the refusal of food (Ilberg, Emminghaus, Zichen, de Borck, Kraepelin, and others); in mental disease depending on infection or auto-infection (Jacquin, Buvat). A very wide application of the method is advocated by di Gaspero, who sees in it a very powerful means of stimulating the whole system in mental disease attended by marked depression or perversion of the functions, and in particular where there is present a supposed lowering of the oxidations in the tissues. Donath speaks highly of the treatment in general paralysis, especially in the early stages, and Alter agrees upon the whole with Donath.

The method of procedure consists in the subcutaneous injection, with all antiseptic precautions, of 400 to 700 c.c. (14 to 24 oz. about), and the repetition of this dose, according to results, every fifth, third, second day, or even every day. In general the liquid employed was a sterilised solution of sodium chloride, 0.75 *per cent.*, but Donath uses a mixed solution of sulphate and chloride of potassium, and of chloride, carbonate, and phosphate of sodium; of this he injects 18 to 35 oz. every third or fifth day.

On the grounds of the above-mentioned results Dr. Wickel proceeded to treat with saline injections seven cases of dementia præcox, three cases of general paralysis, two cases of psychosis associated with chronic alcoholism, two of melancholia, and a case each of mania, epileptic excitability and confusion, and mental confusion and unrest in a severe case of typhoid. In particular the effects of the treatment were noted on the symptoms *collapse*, *refusal of food*, and *prostration*, which symptoms were selected as the indications for the injections.

In general 400 c.c. (14 oz.) of 0.75 per cent. NaCl solution were injected, and this dose was repeated every second day or every day, some twenty injections in all representing the injection "cure."

The results obtained were by no means encouraging; in two or three of the whole group some benefit seems to have been effected; the other cases appear to have been uninfluenced or certainly not improved by the treatment.

H. SAINSBURY.

The Effective Dose of Bromide in Epilepsy [*La dose suffisante de bromure dans l'épilepsie essentielle*]. (*Gaz. des Hôp.*, June 13th, 1903.) *Jamot*.

The treatment of epilepsy has to be considered under the following aspects:—(1) The means to be employed during the seizure; (2) the treatment of the stage following immediately thereon; and (3) the treatment of the interval between the seizures. The use of bromides concerns the last-named only.

An indiscriminate and unmethodical use of the bromides is the cause of the not infrequent ineffectiveness of the drug. The rules of administration advocated by Dr. Jamot are those laid down by Gilles de la Tourette in his work on the practical treatment of epilepsy: "The size of the dose is determined by the age of the patient, his individual tolerance of the drug, the number and intensity of the epileptic manifestations."

Children bear the drug proportionately well, but in their case, as in all cases, the individual susceptibility must be gauged tentatively.

To establish this individual dose Gilles de la Tourette proceeds by the method advanced by Charcot, *viz.*, the administration in periods of three weeks of a dose which rises and falls thus:—During the first week the *daily* dose is, say, 3 grms. (45 grains), the next week it will be 4 grms., and the third week 5 grms. The fourth week is restarted with 3 grms., the fifth week 4 grms., and so forth; the sequence proceeding 3, 4, 5—3, 4, 5 indefinitely.

For the dosage to be really effective that number of grains of bromide must be administered *during the week of maximum dosage* which shall produce distinct physiological effects, *viz.*, a certain degree of lassitude and of somnolence, and in addition the "pupil symptom," the pupils reacting neither to light nor accommodation and being, moreover, at their maximum of dilatation. That maximum dose, whatever it be, will exceed its predecessor by 15 grains, and the dose before that by 30 grains—the common difference in every series being 15 grains.

Dr. Jamot advocates the administration *per os* as the most satisfactory method.

H. SAINSBURY.

On the Inhibiting Influence of Morphinism on the Convulsive Manifestations of Hysteria and of Epilepsy [*Action suspensive de la morphinisation sur les manifestations convulsives de l'hystérie et de l'épilepsie*]. (Prog. Méd., July 18th, 1903.) Antheaume.

Dr. Antheaume records two cases of chronic morphia poisoning in which, during the continuance of the habit, the convulsive seizures, to which the patients were accustomed, ceased, to reappear with the suppression of the morphia habit. To facts of a similar kind "Auguste Voisin, Paul Garnier, and Jules Voisin had previously drawn attention." Beyond the recording of the cases the writer does not proceed; least of all does he suggest that patients suffering from convulsions should replace their affliction by those evils which attend chronic morphinism.

Of the value of morphia as a means of suppressing convulsions we have a good example in its use in the convulsions of uræmia, but this temporary employment is another matter.

H. SAINSBURY.

Apomorphine Hydrochlorate: its Use in Mental Affections. (Merck's Report, 1903.)

The hypnotic powers of apomorphine have been overshadowed by its action as an emetic, but that it possesses sedative and hypnotic powers appears from recent investigations. In 1901 Merck reported the results obtained by Ch. I. Douglas with small doses, insufficient to nauseate. The mean hypnotic dose was about 2 m.g. ($\frac{1}{32}$ grain) *i. e.*, about one third of the emetic dose. Sleep was said to follow within five to twenty-five minutes, and to last one to two hours. Because of the short duration of the sleep it was advised to associate some mild hypnotic with the apomorphine. Further reports come now from Rabon, Coleman and Polk, and Faucher, who, working with doses ranging between $\frac{1}{40}$ and $\frac{1}{8}$ grain, find the drug of great use as a sedative and soporific in states of violent excitement and restlessness. The doses are invariably given hypodermically, and vomiting or nausea is generally produced. Coleman and Polk have used apomorphine in the excitement of alcoholics ($\frac{1}{8}$ grain) with much success; Faucher in hysteria, hystero-epilepsy, and epilepsy pure and simple. In hysteria the mental impression caused by the hypodermic needle is probably of value in addition to the undoubted depression caused by the vomiting.

Considering the difference of administration in the methods above described, it would not be unreasonable to try first the smaller (non-emetic) dosage, and if need be to advance from this to the emetic dose. We are inclined to think that the latter is likely to prove the more generally effective.

H. SAINSBURY.

Bromipin. (Merck's Report, 1903.)

This combination of bromine and sesame oil, like the analogous compound iodipin, continues to hold its ground as an alternative to the

usual bromides. Its oily basis gives it a nutritive value in addition to the medicinal value which attaches to the bromine element. It is employed in epilepsy, in hysteria and neurasthenia, and it has been specially recommended in nervous insomnia, vertigo, and agoraphobia; also in eclampsia infantum (Wassing, Rahn). The nutritive and strengthening properties of bromipin have been frequently insisted upon by many observers, and more recently by Moller.

Large doses should be given in enema form, the $33\frac{1}{3}$ per cent. strength of bromipin being employed and made into an emulsion with milk. In the case of children and infants Rahn employs the 10 per cent. strength in enema, administering to infants as many grammes as the infant counts months. Children of 1 to 4 years receive 160 minims up to one half ounce; children above these ages 6 to 8 fluid drachms. To adults $2\frac{1}{2}$ to 4 drachms of the $33\frac{1}{3}$ per cent. should be given.

The symptoms of bromism are of much less frequent occurrence with this preparation.

For administration by mouth the following formula has been recommended by Kothe (*Merck's Report*, 1901):—Bromipin (10 per cent.), fl. oz. $3\frac{1}{2}$; the yolks of two eggs: emulsify and then add—Cognac, fl. oz. $\frac{1}{2}$; menthol, gr. $2\frac{1}{2}$. Three or four tablespoonfuls to be taken daily.

H. SAINSBURY.

Lecithin [*Ovolecithin*]. (*Merck's Report*, 1903.)

As a means of promoting nutrition and of conveying phosphorous action in a milder and safer way than by the uncombined element, lecithin appears to be making steady progress, and, we are glad to learn, it has become considerably cheaper.

Its employment in malnutrition in all its forms will interest the alienist equally with those who work in other departments of medicine. The drug may be conveniently given by the mouth in the form of pill or tabloid. Merck's tabloids contain each $\frac{1}{2}$ gr. of lecithin, and of these five to eight are taken before each of the two principal meals.

It may be combined with cod-liver oil in the proportion of 15 grs. of lecithin to 8 oz. of oil, of which two to four tablespoonfuls are to be taken at meal times. This is very large dosage of oil according to the practice of this country, and in order to make the lecithin dose correspond to the smaller administration a much stronger solution of lecithin would be required. Lecithin is so freely soluble in olive oil that there should be no difficulty about this.

Lecithin is also injected subcutaneously, in solution in olive oil which has been previously washed in alcohol and sterilised. Eight grains of lecithin dissolve in 10 c.c. (160 minims) of the oil, and of this 1 to 3 c.c. (16 to 48 minims) are to be injected on alternate days.

Lecithin in subcutaneous injection has been praised by Hartenberg in tabes, general paralysis, hysteria, and various psychoses (*Merck's Report*, 1902). It is recommended also in neurasthenia, senilitas præcox, etc. (*Report*, 1903). In phthisis, administered subcutaneously, it is much praised; also when combined with guaiacal.

H. SAINSBURY.

8. Asylum Reports, 1902.

Some English County and Borough Asylums.

Carmarthen.—The Committee of Visitors report that it has under consideration the establishment of a pension scheme. The Commissioners note that the asylum is overcrowded, which will possibly explain in part the abnormally high death-rate from phthisis. This asylum lays itself out to receive private patients, and at the time of report had forty-two of these, paying from 10s. to £2 2s. per week. There is a proposal to acquire fresh land and build accommodation for them. Dr. Goodall again brings before his Committee the benefits of boarding out patients as a means of obviating the necessity for some of the fresh building which will otherwise soon be required.

Derby County.—The following is a point :

C. R— was brought to the asylum at 2.55 on July 17th. While sitting in the reception room in charge of the men who brought him, and before being formally "admitted," he died. At the inquest the following verdict was found :—"Syncope brought on by acute maniacal exhaustion." I was instructed by the Lunacy Commissioners that the case was not to be considered as an "admission," and that the death was not one of a patient in the asylum. The body was therefore removed by the Chesterfield Union authorities and buried in the Mickleover Churchyard.

The causation by alcoholism among males was 34 in 112 admissions.

It may be recalled here that during the year the Association, through the hospitable kindness of Dr. Legge and the Committee, had an opportunity of making an instructive and pleasant inspection of Mickleover.

Derby Borough.—Of the Brabazon scheme Dr. Macphail writes :

It has certainly had the effect of brightening the lives of many of the patients, and has helped in the cure of not a few. The real interest taken by the ladies in their pupils is not confined to the two hours spent weekly at the asylum in teaching the patients rug-making, basket-weaving, chair-caning, netting, knitting, and different kinds of fancy work, but shows itself in various ways ; it extends to visiting patients at their houses after their discharge, and in some instances helping them to obtain suitable employment. We are the first English asylum to give this scheme a trial, and as our first year was tentative we have not attempted too much. Hitherto the classes have been composed of female patients only, but we hope shortly to start suitable employment for the men. Financially the scheme is self-supporting, and although you as a Committee kindly undertook to be responsible for any loss sustained in the first year, no assistance has been necessary, and we have a small balance in hand which will be spent in giving a treat to the patients.

The system of instruction is excellent, as we have before pointed out in relation to some of the Scotch asylums, but the extension of the teachers' interest to visitation and help outside the asylum is worthy of all praise. More than anything else it will help to break down the invidious and prejudicial difference in the light in which the public regard mental and general disorders.

The alcoholic causation in the males was even higher in the borough than in the county, being 15 out of 41 admissions.

Dorsetshire.—Dr. Macdonald renews an old protest, and suggests that in some cases the greater comforts of the asylum have a determining influence in restoring quiet orderliness, which was absent in the workhouse :

With reference to the aged cases admitted, it would seem very desirable that patients who are only in need of ordinary attention and nursing might be cared for at home or in the workhouse infirmaries. It sometimes happens that the only indication of insanity in these cases is a restlessness by night, which, while annoying to others, is not much proof of insanity.

It is noteworthy that while three general paralytics were admitted, and five died, nine remained at the end of the year.

Glamorgan.—The Committee report :

A few cases of scarlet fever occurred in the spring, but as they were at once isolated the disease did not spread. To enable the Committee to refuse admission to cases of infectious diseases, or to persons coming from districts where such prevail, they have adopted as a regulation, in accordance with Section 275 of the Lunacy Act, 1890, sub-clause 5, the power there granted them to exclude such cases and persons.

The general paralytic admissions included 16 females in a total of 51. Sexual intemperance accounted for two male and nine female admissions, while venereal disease was responsible for four—all males.

Gloucester.—In dealing with the influence of heredity Dr. Craddock gives the following instance of wilful neglect of ordinary caution. But then it always is the madman who does mad things.

A man who had been an inmate here more than once, on the last occasion for some five or six years, unexpectedly began to improve, and at length was so much better that his relatives wished to give him a trial at home. I willingly assented, and he was in due course discharged. Within a few months we heard he was engaged to be married, and he actually was married to, it will hardly be credited, the daughter of a woman who has been here for years, and is never likely to be anywhere else.

Kesteven.—The opening of the new asylum at Quarrington on June 20th, 1902, is recorded in this report, and the arrangements made by Dr. Ewan for the transfer of the patients from Grantham are warmly appreciated by the Committee. One of the wards has been set apart for the reception of private patients at the lowest remunerative rate of payment. The Committee have been obliged to appeal against the assessment, the local authorities having rated the institution on a much higher basis than other asylums in the country. The cost per head, exclusive of site and equipment, works out at £310 for 420 patients, and when the whole accommodation for 600 is completed the cost will probably come down to £265.

London (City).—This institution continues to receive a high proportion of male general paralytics, about 13 *per cent.* of the admissions being due to that disease. No less than eight foreign nations have at least one representative in the asylum. Dr. White attributes an abnormally low recovery rate for the year to the fact that he had received a large number of chronics as fresh cases and not as transfers.

Monmouth.—We can again point out some unusual facts concerning general paralytics in this asylum. The new cases numbered nine, the deaths twelve, while the remainder at the end of the year was twenty-five. This state of affairs points to one of two conclusions—either that the mental condition was of the quiet form which wastes but slowly the small balance of vitality, or that the treatment was more than usually successful in limiting this waste.

Nottingham (City).—The following note by Dr. Powell will commend itself to many who do not accept the theory of syphilis being necessary to the causation of general paralysis :

With regard to the causes of insanity in the cases admitted, intemperance in drink heads the list, and it is noted that the cases from this cause are practically in equal proportions of the sexes, which is quite unusual in the general statistics of the country. Side by side with this fact, it is of interest to find that a much larger proportion of females to males are found to be suffering from general paralysis here than in other places, which leads to the belief that there is a closer connection between drink and this disease, as cause and effect, than is now admitted.

Curiously enough, however, the causation of insanity by venereal disease among the females is abnormally high in comparison with the three-year averages of the Commissioners. The figures are as follows :

	Males.	Females.	Total.
Nottingham City Asylum—Admissions . .	89	95	184
" " " General paralytics	12	6	18
" " " Alcoholics . .	14	12	26
" " " Venereal cases . .	2	3	5

The Commissioners' proportions (57th report) on the admissions are for pauper cases :

	Males.		Females.
General paralytics	11·2	...	2·4
Alcoholics . .	23·8	...	9·7
Venereal cases .	3·1	...	0·8

Salop and Montgomery.—The following is the appreciation of the late Dr. Strange by the Visiting Committee :

The Visitors deeply regret to report the death of the medical superintendent of the asylum, Dr. Arthur Strange, which occurred on May 11th last. He was appointed superintendent on March 18th, 1872, and the Visitors always considered him a most valuable officer. Faithful and zealous in the performance of his duties, he managed the asylum admirably. He died beloved by all who were associated with him.

Dr. Rambaut, in adverting to the high mortality rate (17·91 *per cent.* on average population), attributes it to influenza, which has been endemic in the asylum for years. It and its complications claimed no less than 44 out of the 144 deaths.

We should have been glad to note more liberality on the part of the Committee than is evinced by the grant of £20 per annum to a male attendant who was incapacitated by bodily illness at the age of 57, after 17½ years' service.

Some Irish District Asylums.

Armagh.—Overcrowding is here, as in many of the Irish asylums, a very pressing evil. There were, at the end of the year, 506 patients in accommodation suitable for 310 by day and 434 by night. It is interesting to watch how the new authorities—the County Councils—are facing the responsibilities cast on them. In this case, apparently, no steps were being taken to provide the extra accommodation pressed for in the preceding report of the Inspector, who now gives the County Council straight notice that unless action is taken the Board will report to the Lord Lieutenant that sufficient accommodation is not being provided and maintained. One penalty will be the loss of the 4s. grant, the payment of which can only be made on the fulfilment of the condition precedent that accommodation is so provided. The Inspector trusts that the Committee will reconsider their determination to withhold the small allowance made to those attendants who hold the Association's certificate of proficiency.

He also states :

The condition of the new building continues satisfactory, and it is quite remarkable to find there—owing to their good surroundings—an almost total absence of excitement or turmoil amongst the recent and acute cases. Undoubtedly this block cost the ratepayers a considerable sum of money, but no one who is acquainted with the condition of the institution before the erection of the building referred to, can deny how soothing and beneficial is the effect which the good accommodation and improved surroundings have on the patients occupying it.

Belfast.—In reviewing his admissions Dr. Graham strongly insists on the fact that insanity is as much a physical disorder as is consumption or smallpox. Of course we all recognise this ; but the lay world, especially those who have some influence over the life conditions of their areas, cannot be told so too often, in the hope that they will look on insanity as a disease that can be restricted by the adoption of preventive measures.

Though this asylum is one of those which has led the way in the great improvements that have been shown in late years, it is paying now the penalty for past omissions and vacillation in the prime duty of authorities—the provision of sufficient accommodation for their insane. The Inspector reports that 101 female epileptics, suicidals, etc., have to be at night in an observation dormitory having 55 beds, so that 46 mattresses have to be laid on the floor each night between the beds. In the corresponding male dormitory things are not quite so bad, 60 patients being accommodated in 46 beds and 14 floor mattresses. There are in the whole asylum at Belfast (excluding Purdysburn, etc.) 741 patients in accommodation provided for 440 ! The Committee is going to build a new asylum on the villa colony system. The general paralytics admitted are about 5 *per cent.* of all admissions, while the alcoholics are about 8 *per cent.*

Down.—The fact that in 184 admissions no history could be obtained in six cases only is a good testimony of the industry of Dr. Nolan and his staff in arriving at a conclusion as to causation. He in his last report dealt with “the far-reaching effects *per se* of parental alcoholic

excesses." His observation, unsupported by figures, was subject to criticism, and he now quotes with satisfaction Dr. Wiglesworth's presidential address and Dr. Tredgold's researches in support of his views. One reads with some impatience the strained and pedantic arguments traversing the long experience of Dr. Nolan and, we may say, the whole of asylum superintendents, who have as part of their daily duties to inquire into these matters. We need hardly say that we refer to the prolonged wrangle which started at the Swansea meeting of the British Medical Association.

There are only nineteen patients in excess of standard accommodation, and the Committee have already got plans passed for an extension of 180 beds, which will cost less than £110 each.

Dysentery, which is called the scourge of the asylum, claims 13·8 *per cent.* of all the deaths in the nine years 1894—1902. Considering the care which, as stated above, was taken to get at the probable causation, it is somewhat remarkable that in 184 admissions alcohol could be traced in six cases only; hereditary predisposition appeared in 64. Three male general paralytics were admitted.

We think it right to extract the following printed appreciation from the Inspector's report:

Each succeeding visit of inspection to this asylum satisfies me more completely of the excellent management of the resident medical superintendent, and of the amount of time and thought which he devotes to the efficient and economic working of the institution. The difference between able and careful, and lax and inefficient administration of an asylum means a difference of several thousand pounds a year in the cost of management, and it would be difficult to find a stronger proof of this fact than Downpatrick, where the resident medical superintendent, by formulating for his Committee and the County Council an economical scheme for providing for the chronic and harmless insane of the district, and by the minute attention which he gives to the details of his duties, has effected a substantial saving to the ratepayers.

Ennis.—The extension of the asylum, much called for on account of overcrowding, is to be undertaken, and plans have been approved by the authorities. The Inspector reports that the asylum population has only been kept within reasonable limits by transferring to workhouses patients who certainly are not in many instances suitable for treatment in these institutions. Happy Clare has no general paralytics, and only about 3 *per cent.* of alcoholics in the admissions.

Limerick.—Dr. O'Neill reports most favourably on the introduction of weaving looms into the male wards, and hopes to see some instituted on the female side. A satisfactory tweed is made for the patients' clothing. He calls on his Committee at once to provide more accommodation, and strongly urges them to extend the asylum in preference to building a new auxiliary asylum or reconstructing workhouses, these being the three modes of providing further accommodation allowed by the Act. The Inspector enforces the demand by notifying the Committee of the Board's intention to act as stated above if steps are not taken. The Inspector adverts to the fact that he found the temperature in the male hospital to be 48 degrees only, and this in mid-winter. There were no general paralytics in the asylum, and alcohol only

accounted for about 7 *per cent.* of the admissions. In 30 *per cent.* of all admitted hereditary predisposition was traced.

Some English Hospitals.

Barnwood.—We are most glad to read that out of the favourable surplus of income no less a sum than £4671 has been appropriated to increasing the Pension Fund, which now stands at the value of £17,000. Nothing can react more strongly on the care of the patients and the general progress of the institution than such a pledge to the future. The rating authorities have suddenly raised the ratable value of the hospital from £807 to £2030. Remonstrance succeeded in reducing the latter sum to £1800, with which, of course, the Committee are not satisfied, and they will appeal again. The extra amount of rates thus imposed would probably suffice to keep two patients. Dr. Soutar mentions a case which recovered after five years' illness. No improvement was seen till many stumps had been extracted and replaced by artificial teeth. After that she never looked back.

Bethlem.—The number of admissions exceeded the average population, and no less than 43 *per cent.* of those admissions were on urgency orders. This was a substantial increase on the 28 *per cent.* of the preceding years, and resulted from the unusual number of acute cases requiring immediate treatment. Forty-five voluntary patients were admitted, and in the course of the year twenty of this class had to be certified. Rather more than one third of the admissions had been previously insane, and just about two thirds were recent cases of active melancholia and mania.

Wonford House.—It is satisfactory to read that the Committee can report their being satisfied that the institution is in a thoroughly sound condition, and that steady progress is being made. Of the 131 patients 47 paid less than the actual cost of maintenance, while 16 others paid less than the average income. The benefaction thus rendered is termed "assistance," which is far pleasanter and truer than "charity." The latter rather implies active monetary goodwill on the part of someone, which is not exercisable in unendowed hospitals, since the means of assistance can only be found in the excess payments of richer patients. The recovery rate was unfortunately lower than it had been for thirty years, but, as Dr. Deas points out, only thirteen out of the thirty-seven presented any hope of recovery on admission. Three out of twenty male admissions were attributed to sexual excess, but only one to alcoholic intemperance.

Some Scotch District Asylums.

Inverness.—On the advice of Dr. Keay the District Board made a determined effort in the direction of "boarding out," with the result that sixty-five were removed in last year. Only seven were returned as unsuitable. The inconveniences of having one hall for eating, recreation, and public worship are commented on, and it is somewhat surprising to read that two halls were originally provided for the latter purposes, but

were converted into dormitories under pressure of space, and remain as dormitories to this day. In glancing through the statistical tables we note that the causation in one case is attributed to general paralysis. We have before adverted to this matter in connection with other Scottish asylums. We conceive that it is not altogether an untenable view that general paralysis might be deemed to be organic brain disease, and thus returnable as a cause. But this can only be in a case where the evidences of paralysis, such as are seen in a case of general paralysis of the insane, are found in an absolutely sane man. The rarity of such a combination of circumstances would justify a full history of any case in which it existed. On turning to the next table (the form of insanity) we find that two patients admitted are classified under the heading of general paralysis.

Lanark.—The Commissioner reports :

A very pleasing feature in the treatment of the patients was the large amount of interesting literature which was freely distributed throughout the institution. On the tables in every ward there were found books, magazines, and newspapers. Such a generous and thoughtful provision for the entertainment and the distraction of the inmates of asylums is, unfortunately, not common. The number of patients who were seen reading shows that the privilege is appreciated, and Dr. Kerr stated that the number of books destroyed is not great. The arrangement added markedly to the homeliness of the wards, and it no doubt increases the contentment of the patients.

As far as we can calculate from the figures in the report, this excellent asylum seems to have cost considerably less than £300 per bed, all the later additions being included in the computation.

Roxburgh.—This asylum had the misfortune to be the subject of an expensive and fruitless lawsuit, which has demonstrated that the Secretary of State in Scotland can send a criminal lunatic to any asylum he likes. The asylum authorities have to bear the cost of maintenance unless they can saddle some parish with it. In this case no parish could be thus saddled. As the asylum authorities could get no redress they gave notice to all concerned that the patient would be discharged on a certain day. This was done, but the report does not say what was the after history. We are under the impression that such a course would be illegal in England.

Dr. Johnstone gives the particulars of an escape. A man who had a good deal of liberty absented himself for a few days and then returned of his own accord. Later on he absented himself for six months, working at his trade as an engineer near Glasgow. When he found "the outside world less kind than the asylum he came back and begged to be taken in again."

The assignment of 139 causes in 78 admissions betokens more than usual energy in unearthing etiology. In nearly half the cases hereditary predisposition was found.

Some Scottish Royal Chartered Asylums.

The Crichton.—A specially designed sanatorium for the care and treatment of phthisical patients was nearly completed at the time of report. It is built of wood on a brick foundation, with a slated roof. The wards

open on verandahs for the better carrying out of the open-air treatment. There must have been reasons for preferring wood to stone or bricks; but, unless it is intended to cremate the building after a time, those reasons are not apparent to us. We are under the impression that experienced authorities have assigned the marked phthisical mortality of certain wards in old asylums to the retention of morbid elements by the wood in floors and fittings.

Dundee.—In the report, dated June 15th, 1903, the Directors detail the crisis through which this old institution is passing. The District Lunacy Board has agreed to purchase the asylum property at West Green for £90,000. A Bill to legalise the sale passed through Parliament, and only needed Royal sanction to become an Act. Meanwhile, though some suggested that the Directors should apply the purchase money in small grants, the majority decided that a new asylum should be bought or built.

Dr. Rorie is a strong advocate of keeping recent acute cases in bed for some time after admission, in parallel with the usual practice of ordinary hospitals. He thinks that it tends in most cases to materially shorten and mitigate the severity of the attack.

Alcohol took a very heavy toll in the causation, 39 of 87 males and 41 of 114 females being so classified.

Edinburgh.—The delay and uncertainty in the completion of the new City Asylum at Bangour continues to cause the greatest trouble here, the pauper wards being so filled as to impede the admission of private patients at the lower rates. Vigorous remonstrance led to the City authorities providing temporary accommodation for 150 patients at Bangour. Alcohol was assigned as a cause in 28 *per cent.* of the admissions; 13 *per cent.* of the total admissions were general paralytics. In remarking on an outbreak here of asylum dysentery, which Dr. Clouston, being then at Carlisle, was the first to describe as long ago as 1864, he reports an entirely new and most important fact—two of the cats of the wards being found to be affected with the disease. Dr. McRae will probably publish a detailed account of the epidemic.

In the causation tables we note that of 189 male admissions no less than 13, or 6·8 *per cent.*, were classified under syphilis. In respect of “venereal disease,” the five-year averages of the English Commissioners give a percentage of 3·5 for all male admissions. When divided into “private” and “pauper” this general percentage is broken up into 6·4 and 3·1 respectively. Of course, the discrepancy in this respect between the two social states may be accounted for in part by the better chances of obtaining accurate histories in cases arising in the upper classes; but it is a point which claims some attempt at elucidation, if only for the sake of science. We venture to suggest that a note in the JOURNAL by Dr. Clouston would be acceptable, seeing that at Morningside there are large numbers of both classes, and both classes are subjected to the same methods and the same energy of inquiry.

Montrose.—Dr. Havelock animadverts—and justly, too—against the inconvenience that may occur from the present regulations for admission

of voluntary boarders. His remarks apply equally to England. He had a personal application to be taken in from a gentleman. It was explained that the previous sanction of the Lunacy Board was required. The patient warned him that self-control was departing and that immediate care was required to obviate risk of danger. Dr. Havelock took him in as a guest for the three days elapsing before official sanction was received. Dr. Havelock suggests that this sanction should follow admission, and this we entirely endorse. The following figures are striking :

	Males.		Females.		Total.
Total admissions	80	.	81	.	161
General paralytics admitted	5	.	6	.	11

Murray, Perth.—The laundry, which had been refitted and modernised within the last ten years, was almost completely ruined by fire. Dr. Urquhart points to one case among his admissions as notable :

A young man of limited education, who had harassed his mind with ill-considered studies in philosophy and other difficult subjects. Passing on to dabble in mesmerism with a friend of like tastes, he rapidly developed delusions of unseen agency and of a conspiracy against his life and interests. How far the hypnotic experiments may have determined his insanity is of course an open question. I believe, however, that these did more than merely tinge his morbid ideas, that they constituted the determining cause—the last straw, so to speak, to overweight his ill-directed activities.

Part IV.—Notes and News.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

ANNUAL MEETING.

THE sixty-second annual meeting of the Association began at 11 a.m. on Thursday, July 16th, 1903, at the Medical Society's Rooms, 11, Chandos Street, Cavendish Square, London, W. Dr. Wigglesworth, the retiring President, occupied the chair.

Present : J. Wigglesworth, A. R. Urquhart, P. W. Macdonald, W. R. Dawson, R. Jones, A. Miller, C. Mercier, G. Braine-Hartnell, H. H. Newington, A. R. Turnbull, C. H. Bond, R. C. Stewart, H. Rayner, L. C. Bruce, C. K. Hitchcock, E. B. Whitcombe, E. W. White, T. B. Hyslop, R. R. Leeper, J. P. Richards, L. R. Oswald, N. T. Kerr, J. C. Johnstone, W. F. Farquharson, L. A. Weatherly, J. B. Spence, C. A. Wigan, H. A. Benham, D. Blair, C. S. Morrison, S. R. Macphail, T. O. Wood, J. Rutherford, J. Chambers, R. J. Stilwell, D. Bower, D. G. Thomson, R. Legge, F. Beach, F. Watson, H. G. Hill, W. L. Andriezen, G. F. Blandford, J. K. Will, G. S. Elliot, G. H. Savage, C. Edwards, R. Langdon-Down, T. C. Shaw, F. R. P. Taylor, J. E. M. Finch, D. Nicholson, J. W. Higginson, H. Barnett, H. Corner, W. F. Menzies, F. H. Edwards, F. Edridge-Green, W. Douglas, J. Scott, R. H. Cole, S. W. Lewis, F. W. Mott, E. F. Trevelyan, C. Clapham, M. Craig, R. L. Rutherford, R. H. Steen, C. H. Fennell, W. J. Mickle, A. Wilson, H. Stilwell, A. S. Newington, G. E. Shuttleworth, H. F. Winslow.

Visitors : Dr. Koch, C. E. Beevor, Sir Victor Horsley, C. L. Tuckey, W. Melville, T. D. Savill, T. S. Meikle, J. Rorie, and Mr. Vincent Pantin.

FIRST DAY.

The minutes of the preceding annual meeting were taken as read, confirmed, and signed.

ELECTION OF OFFICERS AND COUNCIL.

The President nominated Dr. Bond, Dr. Farquharson, and Dr. Hitchcock as scrutineers. The list as submitted to the meeting was confirmed unanimously.

<i>President Elect</i>	. . . . .	R. PERCY SMITH, M.D., F.R.C.P.LOND.
<i>Treasurer</i>	. . . . .	H. HAYES NEWINGTON, F.R.C.P.EDIN.
<i>General Secretary</i>	. . . . .	ROBERT JONES, M.D.
<i>Registrar</i>	. . . . .	ALFRED MILLER, M.B.
<i>Editors</i>	. . . . .	{ HENRY RAYNER, M.D.
		{ A. R. URQUHART, M.D.
		{ CONOLLY NORMAN, F.R.C.P.I.
		{ E. B. WHITCOMBE, M.B.
<i>Auditors</i>	. . . . .	{ H. GARDINER HILL.
<i>Divisional Secretary for—</i>		
<i>South-Eastern Division</i>	. . . . .	A. N. BOYCOTT, M.D.
<i>South-Western Division</i>	. . . . .	P. W. MACDONALD, M.D.
<i>Northern and Midland Division</i>	. . . . .	BEDFORD PIERCE, M.D.
<i>Scotland</i>	. . . . .	LEWIS C. BRUCE, M.D.
<i>Ireland</i>	. . . . .	W. R. DAWSON, M.D.

Members of Council.

R. J. LEGGE, M.D.; T. CLAYE-SHAW, M.D.; H. C. MACBRYAN; F. R. P. TAYLOR, M.D.; ROBERT B. CAMPBELL, M.B.; M. J. NOLAN.

ELECTION OF ORDINARY MEMBERS.

The President nominated Dr. Weatherly and Dr. Carlyle Johnstone as scrutineers.

The following gentlemen were declared duly elected:—Collins, Michael Abdy, M.B., B.S.Lond., M.R.C.S., L.R.C.P., Assistant Medical Officer, London County Asylum, Bexley (proposed by T. E. K. Stansfield, C. Hubert Bond, and John R. Lord); Johnson, Alice Veville Vowe, F.R.C.S.I., D.P.H.Cantab., L.R.C.P.&S.Edin., L.S.A.Lond., M.D.Bruce, Assistant Medical Officer, Joint Counties Asylum, Carmarthen, S.W. (proposed by Robert Pugh, F. W. Mott, and G. H. Savage); Navarra, Norman, M.R.C.S., L.R.C.P., Assistant Medical Officer, City of London Asylum, Stone, Dartford (proposed by Ernest W. White, Arthur E. Patterson, and Robert Jones); Pearce, Francis Henry, M.B., B.C.Cantab., M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, Earlswood Asylum, Redhill, Surrey (proposed by Charles Caldecott, G. H. Savage, and Robert Jones); Read, George Frederick, L.R.C.S., L.R.C.P.EDIN., L.F.P.S.G., Assistant Medical Officer, Hospital for the Insane, New Norfolk, Tasmania (proposed by Norton Manning, Eric Sinclair, and W. H. Macfarlane); Rhodes, John Milson, M.D., L.R.C.P., L.R.C.S., L.M., Ivy Lodge, Barlow Moor, Didsbury, Manchester (proposed by J. Wigglesworth, T. S. Clouston, and G. W. Mold); Ridewood, Harold Edward, M.B.Lond., M.R.C.S., L.R.C.P., Assistant Medical Officer, Claybury Asylum, Woodford Bridge, Essex (proposed by C. T. Ewart, Philip M. A. Green, and Robert Jones); Roberts, Norcliffe, M.B., B.S.Durham, Assistant

Medical Officer, Cane Hill Asylum, Surrey (proposed by J. M. Moody, H. Gifford Cribb, and Samuel J. Gilfillan); Tredgold, Alfred Frank, Physician to the Littleton Home for Defective Children, 2, Dapdune Crescent, Guildford, Surrey (proposed by F. W. Mott, H. Rayner, and Robert Jones); Turner, Oliver Polhill, M.R.C.S.Eng., L.R.C.P.Lond., Second Assistant Medical Officer, Warwick County Asylum, Hatton, near Warwick (proposed by Daniel F. Rambaut, A. Miller, and Arthur W. Wilcox).

REPORT OF TREASURER.

Dr. HAYES NEWINGTON.—The report is in the balance-sheet, which has been circulated, and I shall be glad to answer any questions concerning it. Generally, I may say that the affairs of the Association are going on very well. At the last Council meeting I recommended that I should be instructed to invest £200; this morning that has been done in Victoria Three and a Half Per Cent. Stock. I have produced the stock receipts to the Council, and my action has been approved by it.

The PRESIDENT.—The report is very satisfactory. In spite of the investment of £200, our bank balance is £50 higher than it was at the corresponding date last year, and I think that fact will satisfy us all.

Dr. MERCIER.—Will the Treasurer let us know what the considerable increase in miscellaneous expenses is due to?

The TREASURER.—The amount so spent in the preceding year was £31 16s., and that sum was made up of insurance, £1 6s. 7d.; Irish Laboratory Committee, £2 os. 4d.; Educational Committee, £2 11s. 4d.; Address to the King, £7 2s. 8d.; British Congress on Tuberculosis, £10 10s.; Irish Pathological Committee, £4 1s. 2d.; Scottish Committee, £4 4s. This year, 1902, the Irish Laboratory Committee took £3 18s. 9d.; insurance the same as before, £1 6s. 7d.; Education Committee, 15s.; Parliamentary Committee, 15s. 5d.; Tuberculosis Committee, £66 19s. 3d.; Rules Committee, £9 3s. 6d.; Statistics Committee, £5 5s. 9d.; book presses for the library, £4 15s. 5d.; handbook, £4 6s. 6d.; Sanitary Congress, £1 1s. The large increase is due to the Tuberculosis Committee, and there will yet be some additional expenses this year with regard to rules and statistics.

The report was unanimously adopted.

REPORT OF AUDITORS.

The AUDITORS reported.—We have examined the accounts of the Treasurer seen all the vouchers, and certified them as correct.

July 15th, 1903.

JAMES M. MOODY, }
E. B. WHITCOMBE, } *Auditors.*

Gaskell Memorial Fund.

1903.				1902.			
July 15.	Balance	...	...	July 26.	Balance	...	...
		...	...	1903	Dividends	...	...
		£	s. d.			£	s. d.
		94	3 4			49	9 3
						44	14 1
		£94	3 4			£94	3 4

In addition to the credit balance shown above, there was standing on deposit to the credit of the Fund on July 15, 1903, a sum of £174 14s. 6d.

H. HAYES NEWINGTON, *Treasurer.*

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.—For the Year 1902.

REVENUE ACCOUNT—January 1st to December 31st, 1902.

1901. £ s. d.	Dr.	Expenditure.	£ s. d.			Income.			Gr.			1901. £ s. d.
538 4 3	To	Journal, Printing, Publishing, Engraving, Advertising, and Postage	321	16	2	By Dividends	...	...	180	15	6	£ s. d.
127 16 3	"	Examinations, Association Prizes, and Clerical Assistance to Registrar	141	8	7	" Sale of Journal	...	...	33	0	0	£ s. d.
52 0 7	"	Petty Disbursements, Stationery, Postages, etc.	156	12	3	" Advertisements	...	...	30	5	1	£ s. d.
102 10 0	"	Annual, General, and Divisional Meetings	156	12	3	" Fees, Certificates of Psychological Medicine	...	...	12	12	0	£ s. d.
51 0 0	"	Rent of Premises at 11, Chandon Street, care of Office, etc.	51	0	0	" Fees, Certificates of Proficiency in Nursing	...	...	171	17	0	£ s. d.
6 6 0	"	Audit and Clerical Assistance	...	...	...	" Subscriptions	...	...	...	...	...	£ s. d.
31 16 1	"	Miscellaneous	...	...	...				630	16	6	£ s. d.
149 1 0	"	Library	...	...	...				...	...	...	£ s. d.
		Balance ...	1007	14	5				...	...	...	£ s. d.
			71	4	3				...	...	...	£ s. d.
£1038 14 2			£1078	18	8				£1078	18	8	£1038 14 2

BALANCE-SHEET—31st December, 1902.

1901.			Liabilities.			Assets.			1901.		
£ s. d.			£ s. d.			£ s. d.			£ s. d.		
10 8 5	Journal Account, balance of	...	1	0	4	Lloyd's Bank:—Bankers	...	...	...	...	...
10 1 11	Petty Disbursements Account, balance of	...	22	1	11	New Zealand Stock:	...	...	...	...	...
4 15 0	Examinations Account, balance of	...	15	13	11	£38 per cent. value at this date	...	...	£380	5	10
32 14 2	Meetings Account, balance of	...	...	...	...	Hack Tuke Memorial	...	...	330	7	1
3 1 3	Gaskell Fund, balance of	...	...	...	...	Victoria Stock 3 per cent. (Dr. Paul's bequest)	...	...	95	1	10
21 0 0	Rent Account, balance of	...	44	5	3	Sales Account, balance	...	...	745	14	9
8 5 2	Miscellaneous Account, balance of	...	21	0	0	Subscriptions Account, balance	...	...	30	3	1
21 7 8	Library Account, balance of	...	...	...	...	Fees Account, balance...	...	...	144	7	6
	Balance:—Balance on 1st January	...	1995	0	0				38	2	6
	Add:—Balance of Revenue Account	...	71	4	3				...	...	...
			1366	4	3				...	...	...
	Debit:—Decrease in value of New Zealand Stock	...	...	...	...				...	...	...
	New Zealand Stock (Hack Tuke Memorial)	...	£5	8	10				...	...	...
	Victoria Stock	...	5	12	3				...	...	...
	Subscriptions written off	...	4	10	5				...	...	...
			26	5	0				...	...	...
1895 0 0			41	16	6				...	...	...
£1406 13 7			1324	7	9				£1438	9	2
			£1438	9	2				£1406	13	7

H. HAYES NEWINGTON, TREASURER.

REPORT OF COUNCIL.

"The past year has been one of further progress in the growth of the Association the membership of which, at the end of 1902, was: honorary members 37, corresponding 12, and ordinary 586. The increase during the last five years has been as follows:

	1898.	1899.	1900.	1901.	1902.
Ordinary members	... 540 ...	... 560 ...	... 568 ...	... 580 ...	... 586
Honorary "	... 38 ...	... 36 ...	... 38 ...	... 37 ...	... 37
Corresponding members	... 12 ...	... 12 ...	... 10 ...	... 11 ...	... 12
Totals	... 590 ...	... 608 ...	... 616 ...	... 628 ...	... 635

"Two honorary members died during the year 1902, *vis.*, Dr. Krafft-Ebing and the distinguished Professor Virchow; and six ordinary members also died—Drs. William Charles Hills, Arthur Strange, George Fowler Bodington (Canada), George Mickley, Bonville Fox, and Neil Harrismith Macmillan.

"During the year forty-six members were elected, but in two of these the election was voided by non-payment of subscription. Eighteen members resigned, and six were removed for arrears. Two honorary members were elected, *vis.*, Edward N. Brush, M.D., Sheppard and Enoch Pratt Hospital, Maryland, U.S.A., and Sidney Coupland, M.D., F.R.C.P., a Commissioner in Lunacy. Dr. Benedetto G. S. Estense, M.D., of Rome, was also elected a corresponding member.

"The papers which were read at the last annual meeting were exceedingly interesting, those of Drs. Mott, Mercier, and Damer Harrison being well discussed. The lantern demonstrations of Drs. Campbell and David Orr were much appreciated.

"The discussion, introduced by Dr. Clouston, in regard to the possibility of providing suitable means of treatment for incipient and transient mental diseases, the Council hope may result in arrangements being made for such cases in the Edinburgh Royal Infirmary.

"The paper by Dr. Bond has also resulted in a special Committee being appointed to reconsider the Medico-Psychological Statistical Tables, and much work has been done by this Committee, whose report is awaited with interest. The Council, at its meeting in May, 1903, also expressed, by resolution, its approval of the Committee having taken an opportunity of calling the attention of lunacy authorities generally to the benefits which may be expected to arise from revision of the present methods of noting and compiling data relating to the malady of insanity. The Council notes with great satisfaction that there is a readiness in every direction to collaborate, with a view to simplification, uniformity, and consequent increase in value, both locally and generally, of the work now done in furnishing returns. The precise nature of the proposed alterations will presumably be submitted for specific approval.

"The legal aspect of insanity in its early stages has been the theme of much consideration and discussion. Sir William Gowers introduced the subject, from the neurologist's standpoint, at the November meeting in London. Drs. Ernest White and Outterson Wood, with a fuller knowledge of the difficulties underlying the proper treatment of the insane, continued the subject in a more special form at the February meeting (this year), and afterwards at an adjourned meeting in May.

"Attention has been called to errors in the statistics of the Tuberculosis Committee's Report. The tables were submitted, under the direction of the Council, to Dr. Tatham, of the Registrar-General's Statistical Department, and were corrected by Dr. Chapman, himself a statistician of high repute. The special thanks of the Association are due to Dr. Chapman for his revision of the tables and his comments thereon, copies of which have been distributed to every member.

"The Parliamentary Committee has watched for legislation in respect to the insane, and has taken action with the Parliamentary Committee of the British Medical Association.

"The Rules have been under discussion by the Committee appointed at the last annual meeting, and their report will be laid before the Association.

"The Educational Committee has directed special attention to popularising the examination for the certificate of the Association, granted to medical men for proficiency in the knowledge of insanity, and a scheme, agreed upon by the Educational Committee, is brought forward by Dr. Mercier, the secretary, whose work in this direction places the Association under a great obligation to him.

"Meetings of interest, held by the various divisions, have been well attended. The extension of membership in some of the divisions has received the earnest attention of the respective secretaries, and the following tabulated membership and attendances is given for the five divisions:

	Northern and Midland.	South Western.	South Eastern.	Scottish.	Irish.
Membership ...	143 ...	109 ...	222 ..	66 ...	52
Attendances ...	13 ...	Nos. not stated.	35 ...	17 ...	9
(Two meetings in each division) ...	13 ...	...	10 ...	18 ...	10

"The President has directed the course of the Association in a distinguished and courteous manner.

"The Association is under great obligation to the Editorial staff, the Registrar, the Treasurer, Hon. Secretary, and other Officers who devote so much of their time and influence to its interests."

The report was adopted *nem. con.*

VOTE OF THANKS TO THE COUNCIL AND OFFICERS.

The PRESIDENT.—I have very great pleasure in rising to propose a vote of thanks to the Council and officers. This is a vote which naturally occurs every year, and perhaps on that account we get into a perfunctory way of passing it. I think that we hardly realise how much the Association is indebted to these permanent officers for the amount of work which they do for the Association. I do not think we quite realise how much they have to do. Until one comes to the position which I have had the honour of occupying during the last year, one is not brought into contact with the details of the Association. Referring to the work of our Hon. Secretary, that connected with a single meeting takes up more labour and correspondence than any one who has not paid attention to the subject has any idea of, and the success of our meetings largely depends on the way in which his work is carried out. And again, we know how deeply indebted we are to our Treasurer, without whose hearty assistance we could hardly get along. Our Registrar's duties, perhaps, are not very arduous, but the duty requires to be carefully carried out. And we know the immense amount of time our Editors bestow on the work connected with the JOURNAL. We receive our JOURNAL every quarter very punctually (hear, hear)—well, at all events, fairly punctually,—and we are very apt to overlook the enormous amount of labour which is involved in preparing it. Our Editors do this work in a very unpretending manner. And we desire, therefore, to propose a very hearty vote of thanks to all those officers. The Association is going on very well, and it is due to the large amount of work which our officers do in the different departments of the Association that it does progress in that exceedingly satisfactory manner.

The motion having been seconded, it was carried by acclamation.

Dr. URQUHART.—I have been asked to make acknowledgment in response to this vote of thanks. The great joy that the officers of this Association have is in seeing the Association prosper. We feel very much indebted to you, sir, for your kind words.

REPORT ON PRIZES.

The PRESIDENT.—I am sorry to say that there are no prize-winners to announce. That is partly due to the fact that the meeting is a week earlier this year. The Gaskell prize examination has not yet taken place, but I understand there is a candidate or candidates for it; therefore we hope the prize will be awarded at a later date. I am also sorry that there are no essays for the Bronze Medal, and I would call your attention to the desirability of all assistant medical officers being acquainted with the fact that the prize exists, and that the obtaining of it is not merely getting ten guineas and a bronze medal, but the great honour of having

received the *imprimatur* of the Association. I hope in future we shall not have to complain that no essay has been received.

REPORT OF PARLIAMENTARY COMMITTEE.

The Parliamentary Committee begs to report that it has sent to the Lord Chancellor and the Commissioners in Lunacy a memorandum containing various points which require alteration in the Lunacy Bill when it is brought before Parliament. Acknowledgments of the receipt of the memorandum have been received from the Lord Chancellor and the Commissioners in Lunacy.

A representation on the subject of pensions in district and parochial asylums of Scotland has been sent to the Scottish Secretary, and an answer has been received stating that the suggestion of the Association has been noted for consideration with other proposals for the amendment of the Lunacy (Scotland) Acts, but that his lordship could come under no obligation on the subject.

Three meetings of the Joint Committee of the British Medical Association and Medico-Psychological Association have been held. A memorandum regarding certain difficulties now existing in the Lunacy Act has been approved by the Committee, and has been forwarded to the Lord Chancellor, together with a copy of the correspondence between the General Secretary of the British Medical Association and the Lunacy Commissioners. This memorandum has been acknowledged by the Lord Chancellor, and the Commissioners in Lunacy have applied for several copies.

The Lunacy Acts Amendment (London) Bill, which has passed its second reading in the House of Lords, the object of which is to enable the London County Council to establish houses at which persons alleged to be lunatics may be received for preliminary examination and treatment, has been reported to the Committee. It was resolved that the provisions of the Bill require careful examination, and, in some respects, amendment. It was decided to ask the Joint Committee to take the Bill into consideration.

Dr. URQUHART: Might I ask what attitude the Parliamentary Committee has assumed towards the Bill that is now before Parliament?

Dr. HAYES NEWINGTON.—We considered it yesterday, but the time was too short to go into the matter fully. The objects of the Bill—to provide reception houses in London—seemed to be good, but one or two members of the Committee took exception to the possibility of prolonged detention occurring under it. In consequence of the necessity for all the members of Committee having to consider it, we thought it best to simply notify that we had got the matter in hand, but that we could not go any further at present.

The PRESIDENT.—Is it your pleasure that this report be adopted?

Carried.

REPORT OF THE EDUCATIONAL COMMITTEE.

Dr. MERCIER.—The Educational Committee during the past year has done, as usual, a very large amount of executive and disciplinary work, relieving the Council and saving its time; and in addition it has remodelled the regulations for the medical examination in the direction of popularisation, which we hope will result in a considerable increase of candidates for that examination.

The report was adopted.

REPORT OF RULES COMMITTEE.

The PRESIDENT.—The Rules Committee report is perhaps the most important matter which we have to consider to-day. Each member has had a revised copy of the rules sent to him, and I think that this report fully justifies the action of the meeting last year in referring the question for a more detailed consideration. In fact, all the rules have been fully discussed by the different branches of the Association, and the Committee has had their reports before it. Dr. Urquhart, as Chairman of that Committee, will move the adoption of the report. There are items in it that may be taken exception to by some members, but in the general broad outline the Committee has brought the rules into harmony with the intentions of the Association.

Dr. URQUHART.—The report of the Rules Committee is comprised in the print which has been sent to every member of the Association. That print is to be supplemented by another rule, which has been drafted by the Solicitor of the Association, Mr. Wigan, *vis.*, "Save so far as determined by statute or by the Articles of the Association, the management and administration of the Association, the rights and obligations of members, the duties, powers, and privileges of officers of committees and divisions, shall be such as may from time to time be determined by the bye-laws adopted by the annual meeting, or by any extraordinary general meeting convened for the special purpose, provided that special notice shall have been given in the notice convening such meeting or on the agenda paper accompanying any such special notice." You will see that is a rule which is merely technical, and an addition to which nobody can reasonably object.

In proposing the adoption of the report of the Rules Committee, I have to claim your indulgence in being permitted to read what I am empowered to ask you to accept. The alterations presented for your consideration are complicated in detail and affected by stringent legal provisions. I feel that there will be less danger of discursiveness and less danger of omitting important points in thus formally dealing with the matter. First of all I would remind the meeting that the rules of the Association have been cast into the melting-pot by the remit of the last annual meeting. They were submitted to the Divisions for consideration of the most drastic character. It was evident that the Association had outgrown its constitution; and, while the Committee felt that a constitution which had permitted of the great increase in numbers, and in influence, and in working capacity, such as we have happily displayed, should not be changed lightly, yet they felt that the instructions of the last annual meeting and the replies of the Divisions should be acted upon with freedom and decision. But the replies of the Divisions showed that there were differences of opinion in various localities. Local interests found expression, although we may take it as fundamental that all were mainly concerned with the welfare of the Association at large as well as with the rights and privileges of individual members. Following on the best Parliamentary traditions of the country, the Committee dealt with these differences in a spirit of conciliation and compromise, and I trust that the result effected will commend itself to you as wise and prudent.

The amended articles have been sent to each member of the Association, according to the plan of last year's Committee, thus showing the proposed additions and proposed omissions by the style of type. I pass over minor details, for the time at our disposal to-day is very short. In the course of years, those who have been responsible for the working of the Association have found certain weak points in the rules which require remedy. These have been made good on the suggestion of the officials. Further, all rules passed, after due notice, since last revision, are now submitted in their appropriate connections. To come to the main points at issue, included in a narrow compass, *vis.*, the feeling that the Divisions should have greater internal freedom; that they should be fully represented on the Central Council; that they should have act and part in the management of affairs to a greater extent than in the past,—that was the mainspring of action; and in order to gratify the natural ambitions of Divisions, to stimulate them to still greater activity for the common good, certain large changes have been embodied in the draft now before you. While it is evident that the Association has been reinvigorated by the establishment of these local branches, and that much more is still to be expected of them, the Committee have proposed these changes in no spirit of hostility to existing methods of management. They are convinced that the affairs of the Association have been administered both wisely and well; and, further, that its prosperity has been directly due to those who have given so much time and care and attention to the multitude of details which constantly have to be adjusted in order to secure the smooth and well-ordered working to which we have so long been accustomed. Now to come a little closer to the main changes which have been proposed. Those who have followed the course of the business transacted at the divisional meetings last autumn will be familiar with the proposals then submitted to the Committee. Briefly, the Divisions desired to appoint their own secretaries and annually to return direct representatives to the Central Council. The South-Eastern Division, however, requested that representation should be proportional. That request came with some emphasis, for the South-

Eastern Division now numbers 222 members, compared with 109 in the South-Western Division, 143 in the Northern, 66 in the Scottish, and 52 in the Irish Divisions respectively. A rigid proportional representation would have borne hardly upon the remoter parts of the kingdom, which are already under the burden of geographical difficulties. Besides, the arrangements for the representation of assistant medical officers had to be respected, and it was felt that the Council should have power to nominate a few members for special reasons which are continually arising in the work of the Association. Therefore, after very prolonged consideration and discussion, the arrangement now presented to you was adopted by the Committee. They have given effect to the representations of the predominant partner, while conserving the interests of the smaller and remoter divisions. They believe that a practical solution of the present difficulties has been secured, and that there is now an elasticity of constitution which will permit of future development without the necessity for again altering the relative regulations. Although Article 65 is necessarily somewhat cumbrous in form, it is really a simple statement of proportional representation adapted to the increase of the Association in time to come. Consequentially, the rules are altered in important respects. The Council is now subject to annual re-election, and the same principles of election adopted for annual meetings must necessarily guide the elections at divisional meetings. The essentially democratic procedure, the devolution of interests, which was demanded by the Divisions, must necessarily apply to the constitution generally, and similarly affect the Divisions in their internal affairs. Carrying out this principle, it is proposed to add to the standing Committees an important committee for nominations, but it is not calculated to cause any violent change in the conduct of our affairs. Personally, I am certain that the proposed Nominations Committee will issue in a practical assurance that the honours of the Association have been conferred with sound judgment and after the exercise of conspicuous care. Specially, in regard to the election of honorary members, your Committee have reluctantly come to the conclusion that the number shall not exceed forty; but they have hedged about this roll of fame with such regulations as seemed desirable to conserve it as a real honour, sparingly conferred. Very properly, the audit of the accounts of the Association is relegated to members outside the Council. That was so widely demanded that I need not urge it on your attention. I suppose that it will now be necessary for the officials of the Association to look further ahead in their prospective arrangements. It would seem desirable that the divisional meetings in autumn should proceed to consider their nominations, so that the voting papers may be prepared for the spring meetings; also, that the dates of all meetings should be fixed annually. If the Council meetings are to be so fixed, it follows that the same rule should apply to divisional meetings. We require to so arrange that the greatest possible number of members shall be in a position to attend the greatest possible number of meetings. Annual revision will distribute the dates to this end. In Scotland it so happens that certain days of the month are suitable for all, but there has been trouble in accommodating Scottish meetings, at the last moment, to changes of date of the Council meetings. Many members can so adjust their asylum committee work so as to fall in with Association meetings, if only they know in time.

All this means a considerable increase in the duties of the officers of the Association. While it was a small affair it could well be managed on the lines of a happy family; but, now that the various interests are enlarged and somewhat divergent, changes must be adopted to suit the altered circumstances. I feel sure that the officers will rise to the occasion. They have long borne the heat and burden of the day, and you may load them still further without fear of undue complainings. At least, that would be in accordance with my long and intimate acquaintance with them, honoured as I have been with their valued friendship.

There remains the question of the division of the rules into articles and bye-laws—i. e., *fundamental regulations*, which cannot be altered without the troublesome and expensive process in which we are now engaged; and *temporary laws*, which may require alteration from time to time in the varying circumstances of the Association. That is, obviously, largely a legal question. Your Committee has had the benefit of Mr. Wigan's advice in regard to these and similar details, but we could not go to the expense of adopting that advice until the finding of the Association is made known. Briefly, your Committee desired to have as few articles and as

many bye-laws as possible, and Mr. Wigan has prepared a preliminary report on this matter, which I shall only read if desired. It is severely technical, and, in the opinion of the Committee, must be finally adjusted by our Solicitor. Certain questions were also proposed to Mr. Wigan, the issue of which will be apparent in the motion which I am about to move.

But, before I do so, I feel it to be within my right as Chairman of the Rules Committee to make special mention of the valuable services rendered to the Association in this connection by the Treasurer and Dr. Carlyle Johnstone. Dr. Hayes Newington's intimate knowledge of our business affairs was, of course, at our command, but he has also devoted much time and energy to the elucidation of our legal position. Dr. Johnstone spared no pains in critical and constructive details, and, whatever may be the fate of the report, the Committee is largely indebted to these gentlemen.

Finally, I have to explain that if this meeting, after due consideration, do accept the articles as to-day submitted, it will be necessary to have two special meetings in the autumn. At the first of these, resolutions will be proposed which, to have the effect intended, must be passed by a majority of three fourths. At the second, to be held about three weeks later, a simple majority suffices. I beg to explain, with emphasis, that these formal resolutions cannot be materially altered, and that they will give effect to the finding of this meeting if you accept these articles. Therefore, again with emphasis, any debate must be here and now, for we ought to consider ourselves in honour bound to carry out the intentions of this meeting in detail.

I now move that the Articles of Association of the Medico-Psychological Association of Great Britain and Ireland, as contained in the report of the Rules Committee as now presented to this annual meeting, be generally adopted; and, further, that it be remitted to the Rules Committee as now constituted to request Mr. Wigan, the Solicitor of the Association, to take opinion of counsel if necessary in so dividing the articles and bye-laws as may seem legally appropriate, preserving the rules now adopted in their intention and scope, amending them verbally where needful, and inserting such references as may be expedient; and also that the Solicitor be requested to prepare resolutions appropriate to the special meetings to be held in autumn for the adoption and confirmation of the articles and bye-laws as prepared by him, and to lodge at Somerset House such documents and prints as are required by law. And lastly, that the Rules Committee shall report to the President when these matters are so far advanced as to enable him to call the special meetings herein referred to.

Dr. MILLER.—I have been asked to second the motion proposed by Dr. Urquhart. I do so readily, although some months back I should not have risen with any feeling of confidence to support such a motion. But after they have been through the mill as they have been during the last twelve months, I feel sure that this meeting will agree that further discussion will not lead to any practical good result. These rules have been thoroughly considered; the Divisions have got—if I may say so as a divisional man—more than they anticipated, but not more than they were entitled to. Without further remarks I second Dr. Urquhart's resolution.

Dr. ROBERT JONES.—I quite agree with everything that has fallen from Dr. Miller with regard to the colossal task which Dr. Urquhart has had. The rules are here for us to decide upon to-day. I was one of the earlier committee of a year ago on these rules, and at the last annual meeting the matter was adjourned and handed over to another committee, of which also I have been a member. The findings of the Committee are not quite unanimous, and with your permission I beg to call attention to one or two changes which I should still like to see made. In the first place, regarding Rule 17.* Our Association has ordinary, corresponding, and honorary members. At the present time we have no less than thirty-seven honorary members. These members enjoy all the privileges of the Association except voting; that is to say, they have notices of meetings sent to them wherever they live—and many of them are abroad; all the papers, including the JOURNAL, sent to ordinary members are sent also to the honorary members. I happen to know the inner working of the Association, and I know that the Treasurer has a

* The numbers of the rules throughout the discussion are those submitted by the Rules Committee, and do not correspond to the ultimate numbering of the rules.

very firm hand upon the money-bags. It is a most difficult thing to get recruits for ordinary membership, and for every one that we see on the agenda paper of to-day I have written perhaps half a dozen letters before the candidate came forward. There are certain societies whose honorary members number almost as many as the ordinary members, but I think for our Society forty is an excessive number, and I shall be glad to propose that the number of honorary members be limited to thirty. My resolution in that case would be, "The number of honorary members elected annually shall not exceed three, and the total number shall not exceed thirty." In future, therefore, no honorary members would be elected until the present number be reduced to under thirty. I have no similar objection to corresponding members. They obtain no monetary advantages, but they derive a coveted honour from being corresponding members of our Association. I should like to see the list of corresponding members very much amplified, and the honorary membership very much curtailed.

The PRESIDENT.—It will be convenient if we take one point at a time. If Dr. Jones will move a resolution on any point I shall ask if any gentleman will second it.

Dr. MORRISON.—May I suggest that these rules may be taken paragraph by paragraph? There will not be any objection to most of the paragraphs.

It was agreed to adopt this course.

The PRESIDENT.—We will take these *seriatim*:—Rule 8, agreed; Rule 9, agreed; Rule 14, agreed; Rule 15, agreed; Rule 16, agreed.

Rule 17.—The number of Honorary Members elected annually shall not exceed three, and the total number shall not exceed forty.

Dr. Jones has a resolution on this rule. I ask if anyone seconds Dr. Jones's resolution.

Dr. MERCIER.—I second it.

Dr. URQUHART.—This is not a question that requires much discussion, and Dr. Jones has explained exactly how matters stand. I might also say that the American Medico-Psychological Association, numbering about 380 members, has an honorary membership of 21 in all. Our rule permits of 40, and I am sure that everyone here would desire that the number should be lessened. But just consider before you vote how this is going to affect the Association. There are 37 honorary members at the present moment. There are at least five candidates for honorary membership at present, and you will be unable for many years to elect any honorary member under Dr. Jones's resolution, because you will have to wait till at least eight of them have died before you have a vacancy for one. The Committee considered that they could not advise the Association to reduce the number under 40; but the matter is entirely for the Association to decide, and you will vote now knowing the whole circumstances relevant to the question.

Dr. Jones's resolution was put to the meeting and lost.

The PRESIDENT then put the original recommendation as a substantive motion, and it was carried.

Rule 18, agreed; Rule 21, agreed.

Rule 26.—Upon the application of a sufficient number of Members the Association, on the recommendation of the Council, may constitute a new Division of the Association in any locality of the United Kingdom or the Colonies.

Dr. MORRISON.—I beg to propose an alteration. At present it reads: "Upon the application of a sufficient number of members the Association, on the recommendation of the Council, may constitute a new division of the Association in any locality of the United Kingdom or the colonies." I propose that the words "on the recommendation of the Council" be omitted. I do not see the utility of changing this rule if the Association can only act on the recommendation of the Council; with the Council rests the actual authority, and the Association cannot by any independent action constitute a new Division without the recommendation of the Council being first obtained. Let the Council retain the authority in the future as in the past, but if a change is considered desirable, let the discretion be entirely in the hands of the Association. The new rules are intended to advance the authority of the Association and to widen the basis of authority, but by altering the rule you only give with one hand and hold back by the other. The Association

may even never hear of an application being made if rejected by the Council. I think every application for a new Division should be determined directly by the vote of the members of the Association without the intervention of the Council.

There being no seconder, the amendment was not proceeded with.

Dr. MERCIER.—I wish to make a very small addition to Rule 26. It runs "any locality of the United Kingdom or the colonies," but I think we should have used the words "or dependencies thereof." By the present wording we have excluded the great dependency of India, where possibly we may wish to form a division.

Dr. ERNEST WHITE.—I second that.

Dr. URQUHART.—Of course it would be an appropriate alteration.

Carried.

Rule 28, agreed.

Rule 30.—The dates of the Annual, General, and Divisional Meetings of the Association and of the Quarterly Meetings of the Council for each year shall be fixed at the Annual Meeting. All Members of the Association shall have a right to attend any of the Divisional Meetings and take part in all business of the Meetings, save such as refers to the internal management of the Division.

Dr. ROBERT JONES.—I rise to propose a modification to this rule. It is well known to the Association that the General Secretary, whoever he may be, has the burden and responsibility of arranging the various meetings—at any rate to a certain extent. This Association's meetings are not limited to London; it arranges one of these meetings every year in the provinces. I consider that the solidarity of our Association, and good feeling and fellowship, and the interest taken in asylums generally, are in a great measure due to the fact that we shift our venue from here and go to some of the provincial asylums to hold one of our quarterly meetings. It is almost impossible for those of us who hold posts in public asylums, as we are the servants of the committees of those asylums, to fix engagements a year ahead. This resolution suggests that all meetings—annual, general, and divisional—should be fixed definitely a year in advance. I plead for some change in that regulation, a little more elasticity to allow the President and Secretary and other officials of the Division, also our possible hosts for the time being, in the provinces, to fix their own time to receive us. And I beg to suggest an amendment to this rule by the insertion of the words "so far as possible" after the word "dates."

Dr. ERNEST WHITE.—I have very much pleasure in seconding that. As a past divisional secretary I know the importance of this, and it is absolutely impossible to fix far ahead the dates of the annual, general, and divisional meetings absolutely and finally. For instance, I do not know at the present time what dates my committees will fall upon next year. I know them up to the end of December, but I do not know after that; and it might happen if these dates were fixed that your President would not be able to occupy the chair. That is one instance of what might happen. I agree with Dr. Jones that there should be a certain amount of elasticity about these dates, so that they can be adapted to the requirements of the time.

Dr. BRUCE.—As honorary secretary of a Division I cordially support the alteration proposed by Dr. Jones, and I hope that the Rules Committee will accept it.

The PRESIDENT.—I am at one with Dr. Jones. I think that, considering the conditions under which we live, and how we have to adapt the dates which are at our disposal for meetings, it will be an extremely difficult thing to arrange matters a whole year beforehand.

Dr. URQUHART.—As business men, we prefer to know what is to be expected of us a year beforehand at least. We have all got our fixed dates. At the beginning of every year we know when our committee meetings are to occur, and these are the most important fixtures for asylum physicians. But a great many members of this Association can so modify the dates of committee meetings as to fall in with the dates of the Medico-Psychological meetings if we know when the Medico-Psychological meetings are going to be held, and especially when we may expect the meetings of the Council. A representative member is bound to come up from the country to attend these Council meetings, but he is very often prevented if he has only a month's or two months' notice. If he had twelve months' notice he

could generally so arrange his asylum business as to attend. You have heard Dr. Jones, and he speaks from a long experience as Secretary, laden with details of secretarial work in getting up these meetings. Very few people, except a secretary, know how much trouble it is to arrange and so dovetail matters in as to carry on the business of the Association with smoothness, promptitude, and regularity. If the Association votes for Dr. Jones's amendment they will be voting certainly to ease the Secretaries of the Association. On the other hand, if the Association decides that they are to have annually fixed dates, my belief is that will tend to induce a better representation of the Association at our meetings.

Dr. FLETCHER BEACH.—I also have served as Secretary for a good many years, and never found any difficulty in arranging good meetings within three months' time. It seems to me absolutely impossible to arrange a year ahead. We do not know at the present time where we are going for our provincial meeting. Since Dr. Jones has been Secretary you have seen the great success of the meetings. We have had the room full every time; and I do not see why we should adopt the yearly notice when such a good result has been achieved otherwise.

Dr. TURNBULL.—I think that this is a matter for compromise, so that we may meet the wishes of the majority of our members. Personally I sympathise with Dr. Jones, and if he would add somewhat to his motion he will probably carry the whole meeting with him. He does not provide for the case when, perhaps three months after the annual meeting, some circumstance makes it desirable to alter the dates of the other meetings. I suggest: "That it shall be in the power of the President to sanction a change of date when circumstances require it, on the application of the responsible Secretary."

Dr. ROBERT JONES.—I readily agree to that suggestion.

Dr. HAYES NEWINGTON.—I do not see the force of all the arguments which have been addressed to the Chair and to the Committee by our officers. At the same time, I do not suppose we can ignore them. I shall be disposed to recommend our Chairman to accept an amendment somewhat on the lines of that proposed by Dr. Jones, to make it the duty of the Association to fix the dates, and that those dates shall be maintained *bona fide*, unless good cause to the contrary is shown to the President. To insert just the words "if possible" is tantamount to negating the proposed rule, because there will be no end of possibilities of all kinds.

Dr. SPENCE.—Dr. Jones's amendment to this rule would entirely alter its character. I suggest as a compromise that you insert the words, "That the dates of the meeting be decided once a year, and that should any necessity arise for altering those dates, they may be altered on the application of the Secretary to the President, at least three months' notice being given of any alteration."

Dr. WEATHERLEY.—I second Dr. Spence's proposal.

Dr. ROBERT JONES.—In arranging hospitality for provincial meetings three months is a little too long to apply in advance. I know what it is, for I have had several disappointments during the past seven years. Before we could meet at any particular place there have been two or three previous applications, and they could not be received.

The PRESIDENT.—What is your amendment now, Dr. Jones? I think you accepted Dr. Turnbull's suggestion?

Dr. JONES.—It is my original proposal with the suggestion of Dr. Turnbull.

Dr. WHITCOMBE.—I fully agree with the Rules Committee in regard to this rule. I think that the rules are made for the members of the Association, and not for individuals. I could not help thinking, as I passed through the official chair, that anyone who is elected to such an honour should give way to the Association, and not the Association to him. I have strongly felt that for many years, and I think that the Rules Committee have wisely proposed this fixity of meeting.

Dr. RAYNER.—It is rather difficult for the annual meeting to fix the divisional meetings for the year. It seems to me that is the business of the Divisions, and it would throw a very great deal of work on the Association to appoint such a time to suit all the divisions, some of which perhaps are not even represented at the meeting.

A MEMBER.—It says *at* the annual meeting, not *by* the annual meeting.

Dr. RAYNER.—I withdraw my remarks.

The PRESIDENT.—An amendment has been proposed and seconded to Rule No. 30, that the dates shall, as far as possible, be fixed at the annual meeting, "but

it shall be in the power of the President to sanction an alteration of date on the application of the responsible Secretary when, in his opinion, such a change is advantageous."

Dr. URQUHART.—Is there no time mentioned?

The PRESIDENT.—No.

The amendment of Dr. Jones was then put to the meeting and declared lost.

Dr. HAYES NEWINGTON.—It is almost a pity the compromise suggested was not accepted. It was that the dates shall be fixed, only instead of the added words proposed by Dr. Jones it shall be provided that should it be necessary to vary a date the Secretary should obtain the consent of the President at least three months before the date of the meeting. I move that.

Dr. SPENCE.—I second that.

Dr. TURNBULL.—We have had an example this year that something less than two months is required. The date of this annual meeting had to be changed within a period less than the two months required by the proposed rule. And I think that it was either last spring or the spring before that it was found desirable to change the date of meeting of the Scottish Division, which could not be settled till about a month before the date. Why cannot we rectify such a matter in a Division without having to arrange it two months beforehand?

A MEMBER.—I second the amendment.

Carried.

The PRESIDENT.—I now put it as a substantive motion.

Dr. MERCIER.—I propose to amend the rule further in this sense: that in the case of a divisional meeting an alteration in date shall proceed upon the application of the Divisional Secretary to the President.

A MEMBER.—I second that.

Agreed.

Rule 31, agreed; Rule 33, agreed; Rule 34a, agreed; Rule 34, agreed; Rule 35, agreed; Rule 38, agreed; Rule 41, agreed.

Rule 43.—He shall invest in securities in which Trustees are for the time being by law authorised to invest, in his own name and those of the Trustees appointed by the Council in accordance with Article LXXVI, such sums of money as the Council may from time to time direct.

Dr. URQUHART.—I would point out that it is not necessary for this Association to have trustees under its constitution in law, and the Solicitor may alter the word "Trustees" to "Association." The main benefit that the Association enjoys is that it is constituted as a limited liability company, and if by some unhappy chance the Association is sued the members are not liable for any expenses beyond what the coffers of the Association contain.

Rule 45a.—Two Auditors shall be appointed annually by the Association in Annual Meeting, on the recommendation of the Nominations Committee and the Council. These Auditors shall not be chosen from the Council, but from the unofficial members of the Association. They shall attend such meetings of Council as may be necessary in connection with their duties.

Dr. WHITCOMBE.—Who is to judge as to the necessity for the Auditors to attend a Council meeting?

Dr. URQUHART.—It is proposed that the Auditors will be requested to attend meetings of the Council *ad hoc*. When they come as auditors to the Council meeting they have no business whatever to transact, and no voting powers. They will be present at the request of the Council to make any statement that they may have prepared regarding the finances of the Association. There is here an attempt to limit, so far as possible, the somewhat redundant Council of the Association. And further, you will note that we do not entirely depend upon our Auditors; we really depend for a true statement of our finances upon the professional auditor, who every year investigates the whole business of the Association in the Treasurer's books and vouchers. Our Auditors rather represent the Association in looking into affairs broadly and directing the Association as to what ought to be done in the conduct of these affairs.

Dr. WHITCOMBE.—I beg to move that the last clause in Rule 45a be omitted. I think it places the Auditors in an invidious position, because they are elected by the annual meeting, and they present their report to the annual meeting, not to the Council. I have held the post of Auditor for a long time and see no objection

to the Auditors being excluded from the Council ; but I do not think they should be at the beck and call of the Council, as they are appointed by the annual meeting.

A MEMBER.—I beg to second that.

Dr. HAYES NEWINGTON.—As a member of the Rules Committee, I think that Dr. Whitcombe makes a very reasonable proposal, and I do not think that the Committee saw it in that light. The idea no doubt was that the Council should have the right to call upon the Auditors to give their account of the possible sins of the Treasurer. It seems a little invidious, and I support the alteration.

Dr. URQUHART.—I accept it.

Agreed.

Rule 51, agreed ; Rule 54, agreed.

Rule 59 a.—All papers read at the Annual, General, or Divisional Meetings of the Association shall be the property of the Association, unless the author shall have previously obtained the written consent of the Editors to the contrary.

A MEMBER.—I suggest the word "President" should be substituted for "Editors."

A MEMBER.—I second that.

Dr. URQUHART.—The rule as it at present stands, passed by the Association illegally, but considered sufficiently binding to be placed before you to-day, was modified by the Rules Committee. The rule in the British Medical Association and other similar societies is that the consent of the Council must be obtained in these circumstances ; but we considered that the consent of the Council would act as a deterrent, and could not be complied with in actual practice. It was considered that, as there are three Editors, they might take this responsibility off the shoulders of the President ; that it might be rather invidious for the President, as a single gentleman, unprotected, except by his dignity, to give a decision of this sort, and therefore the Committee thought it desirable that the onus should be placed upon those beasts of burden the Editors, who, I suppose, are capable of dealing with anything which might occur.

Dr. ROBERT JONES.—I think this is a very sensible rule. The Association is tied very much to its JOURNAL. Its reputation goes side by side with that of the JOURNAL, and if you hand over this question of dealing with papers read before the Association exclusively to the President there might be a case in which the President of the Association might be the editor of another journal, and might give easy opportunity for papers read before this Association to be printed in another journal. I should deprecate any change in this proposed rule ; I think it is a very sensible and salutary rule.

The PRESIDENT.—A proposition has been made that it shall be the President, after consultation with the Editors.

Dr. ROBERT JONES.—I would be agreeable to that.

Dr. MERCIER.—I also concur. I have always rather objected to this power of appropriating papers, looking at the matter from the point of view of the reader of the paper. Other speakers have looked at it from the point of view of the Association. As a somewhat frequent reader of papers before this Association, it has been my lot to read here a paper which was taken out of a chapter of a book which I subsequently published ; and it would be exceedingly awkward to have one chapter of a book copyrighted by one person or set of persons, and another in another person's name. It is an arrangement which no publisher would sanction, and it would vitiate contracts with publishers. This is to safeguard the reader of the paper, because we are very much indebted to readers of papers here, and I think they deserve some consideration. Some safeguard should be raised against a man inadvertently and unknowingly interfering with the copyright of a portion of a book, which entirely destroys the value of that book.

The PRESIDENT.—I will put the amendment, which will make the rule read : "All papers read at the annual, general, or divisional meetings of the Association shall be the property of the Association, unless the author shall have previously obtained the written consent of the President after consultation with the Editors to the contrary."

Agreed.

Rule 63.—He shall report to the Educational Committee and thereafter to the Council without unnecessary delay any complaints which may be brought to his

notice respecting the holders of the Nursing Certificates of the Association, and shall, if instructed to do so by a minute of the Council, remove the name of any holder from the Register, at the same time placing on record therein the reason for doing so.

The PRESIDENT.—It is with the object of reducing the amount of work which the Council has to do—sifting it out previously to bringing it before the Council. The amended rule works very satisfactorily.

Agreed.

Rule 64 a.—The affairs of the Association shall be managed by a Council, consisting of the Officers, who shall be *ex-officio* Members thereof, and at least eighteen non-official Members of the Association—not less than four of whom shall be, at the time of their election, Assistant Medical Officers.

Dr. FLETCHER BEACH.—I should like to ask why clerical assistance to the Registrar has been cut out; he has a large amount of work to do.

Dr. URQUHART.—By maintaining this rule as it is now, it gives the Registrar certain clerical assistance which is apparently denied to others. It is considered by the Solicitor of the Association that the Council, under Rule 64 a, have full power to give any clerical assistance to any officer of the Association. "The affairs of the Association shall be managed by the Council," so that Rule 64 is unnecessary, redundant, and awkward.

Agreed.

Rule 65.—The number of non-official Members of Council shall be fixed at eighteen, except as hereinafter provided, and they shall be elected annually by the Divisions and the Annual Meeting. Each Division, as formed, shall elect two representative Members of Council. For each complete 50 Members over 100 in a Division that Division shall elect an additional representative; that is to say, two representatives for 100 Members or under, three representatives for 150 Members, four representatives for 200, and so on; provided that of the representatives returned by a Division of 200 Members one representative shall be an assistant medical officer. The Council shall nominate for election by the Annual Meeting the remaining third of the eighteen non-official Members of Council, including four assistant medical officers, unless one or more shall have been returned a representative Member, in which case the Council may nominate such person or persons as they may deem suitable. In the event of new Divisions being formed, or the number of Members in a Division or Divisions increasing so that the representative Members of Council are increased by two, the Council shall nominate an additional Member for election, in order that the proportion of representative Members to nominated Members shall approximately remain constant at two thirds and one third respectively. No Member of Council shall be eligible to hold office for more than three successive years, but he may be re-elected at the Annual Meeting after that at which he retires, or at any succeeding Annual Meeting, except as provided by Bye-law LXXVII.

The PRESIDENT.—This is perhaps the most important rule of all, and I think that it has been altered to satisfy the aspirations of the most radical members of the Association, and to ensure that the Association will be represented in a way in which it has never been represented before.

Dr. MORRISON.—I should like to ask a question as to representatives who have come up from the divisional meetings. Have they to be elected again? ("No.") It says, "They shall be elected annually by the Divisions and the Annual Meeting." They should not be further dealt with at the annual meeting.

A MEMBER.—I think that Dr. Morrison has some justification for his remarks; there is some ambiguity. If the word "respectively" were introduced that would remove it.

Dr. HAYES NEWINGTON.—Twelve divisional members must be finally elected by the Divisions, but others will have to be elected by the annual meeting.

Dr. MERCIER.—Some are elected by Divisions, others by the annual meeting.

Dr. TURNBULL.—Or that they shall be elected by the annual meeting, except as hereinafter provided.

Dr. MORRISON.—Yes, I accept that.

The PRESIDENT.—It is really a matter of drafting.

Agreed.

Rule 67, agreed.

Rule 68.—The General Secretary shall send to each Member of the Association with the circular convening the Annual Meeting, a list, in the Form C appended to these Articles, of all the Officers and Members of the Council for the year about to expire, against the names of each of whom shall be placed the number of his attendances at the Council Meetings in the past year, beginning with the previous Annual Meeting.

Dr. ROBERT JONES.—It is known that the annual meeting does elect officers and members of the Council. These cannot possibly attend the annual meeting at which they themselves are elected. Their first possible attendance would be at the next meeting in November, and consequently registration must date from that time. If you go back to the last annual meeting, you get members who are not elected; it is not a complete list, and it refers to parts of two different years, which, I think, is unnecessary. In the case of those who are elected to-day as members of the Council their first attendance will be in November. The summary for the next annual meeting must of necessity leave out the July meeting, at which the report is presented, because the data are not to hand, attendances not yet having taken place.

Dr. HAYES NEWINGTON.—There is not very much in that point. Of course if there were four meetings debited to every man and he could only attend three it would be so, but if it is stated that there are only three Council meetings to which the subjoined figures refer, that would cover it.

Dr. ROBERT JONES.—That is done at present.

Dr. HAYES NEWINGTON.—There is not much grievance.

Dr. URQUHART.—I suppose you are moving for the omission of the words "beginning with the previous Annual Meeting?"

Dr. JONES.—Yes.

Dr. TURNBULL.—I second that.

Dr. URQUHART.—The underlying reason is that no man gets credit for attending an annual meeting; and what the Divisions want to know specially is how their representatives are attending. It was hoped that, by giving credit for the previous year in this way, that those who attend would have their names recorded. I shall not be surprised if in a few years we find it necessary to have a meeting of the new Council on the second day of our annual meeting. In that case there would be no doubt.

Dr. ROBERT JONES.—My statement is that you are taking two years in your statistics, and you are taking the last annual meeting of the old year and three new meetings of another year; so you have two sets of Council members. And it is an invidious distinction; it is impossible for those who are elected to-day to attend to-day.

Dr. MERCIER.—It is not such a great inconvenience as the omission to record some attendances. No doubt it is an inconvenience that there should be this discrepancy, but it is a much greater inconvenience and much more misleading to the members of the Divisions and of the Association generally that the attendances of members of the Council should be wrongly given.

Dr. SPENCE.—Would it not be well if we had two rows of figures—No. 1 row, possible attendances; No. 2, actual attendances for two years?

Dr. ROBERT JONES.—I accept that.

Carried.

Rule 73, agreed; Rule 74, agreed; Rule 75, agreed; Rule 77, agreed; Rule 77 a, agreed; Rule 79, agreed; Rule 80, agreed; Rule 83, agreed.

Rule 101.—Standing Committees shall be appointed by the Association at an Annual Meeting, and shall continue in office subject to any alteration in their constitution by an Annual Meeting. They shall report to the Annual Meetings and may report to the General Meetings. The Standing Committees shall be—

(a) Parliamentary; (b) Educational; (c) Library; (d) Nominations.

Dr. ROBERT JONES.—May I ask the reason for that?

Dr. URQUHART.—The second half of the first sentence is inserted to cover a possible lapse. More than once the members of this Association have been in such a hurry to get to lunch that they did not stop to conclude the business of the meetings; and twice it has happened that, in spite of protests, they have rushed away without reappointing these very important committees. No one made any overt remarks, but that is not a satisfactory way of doing business. Of course

members ought to stay to the bitter end and complete the work that they are assembled to do. This clause, therefore, has been inserted so that if by any chance we should not have a quorum at the end of an annual meeting, these important standing committees shall not lapse.

Agreed.

Dr. MORRISON.—What is the number forming a quorum of the Association ?

Dr. URQUHART.—Ten.

A MEMBER.—Is it not a fact that committees are appointed to remain in office until their successors are elected ? That is a more usual form of words, and it would cover this.

Dr. URQUHART.—The difficulty has been that a man is elected to a committee, and there he remains, perhaps never coming to the meetings. There are some who do not go to these meetings, but are still valuable members of committees, doing a great deal of work by correspondence. We hope by the Nominations Committee that we shall have these lists thoroughly revised every year ; and if members will only do their part and stay to give these formal but very necessary votes, we shall have no difficulty.

Agreed.

Rule 103.—*The Educational Committee shall be composed of those Members of the Association who are teachers of psychiatry in the Colleges and Universities of the United Kingdom, of the Registrar and Examiners of the Association, and of such other Members as the Association may appoint. It* shall be entrusted with the regulations of the Examinations for the Certificates of the Association, and such other matters touching the teaching of psychiatry and nursing the insane as are delegated to it by the Association or by the Council. The Registrar and the Examiners shall be ex-officio Members of the Educational Committee.*

Dr. MORRISON.—May I inquire what takes the place of the provision for constituting the Educational Committee ? How was the Educational Committee constituted ?

Dr. URQUHART.—The Educational Committee, in the embryo stage of its existence, was a very large committee, because we thought at that time that we ought to have every teacher of psychiatry in the kingdom directly interested in the work, so as to bring as many fish within the net of the Association as possible. It was done, frankly, to help the treasury as well as to urge the importance of our specialty. This Committee is in a very different position to-day ; it is an assured and emphatic success, and it does not require to be laden with all the teachers of psychiatry in all the colleges and universities of the kingdom. The present constitution really means that the unfortunate Secretary of this Committee has to send a great many communications to men who do not take the smallest interest in the work. Our idea is that the Nominations Committee will name the men whom they think best qualified to carry out the intentions of the Association with regard to education, and that they will place these names before the Association for amendment, rejection, or endorsement.

Dr. MORRISON.—Is that made clear in the Rules ?

The PRESIDENT.—It is ; in Rule 103 b. We shall come to that presently.

Dr. MORRISON.—I do not think that the difficulty is removed, because the few members who are interested in the matter will continue in office from time to time—in fact, for all time,—because the Council has still the nomination. And the easiest way of getting over the difficulty for the Council is to appoint the same men. By the present rule you have a much larger field, and though occasionally you may have some members not attending the Educational Committee Meetings you have the advantage of their opinion and their views on any question of policy coming before the Association. You have a certain number, not a close borough ; but that is what we shall work to in time. You provide against that by the rule, which has worked satisfactorily up till now, though it has given a great deal of trouble to the energetic Secretary, whose services we value and appreciate. I beg to move that that portion of the rule should be maintained.

Dr. BRAINE-HARTNELL.—I second that.

* The words which the Rules Committee proposed to delete were in their report printed in italics.

Dr. HAYES NEWINGTON.—There is no greater curse in the intelligent management of any large machine like this Association than having a committee over-large and comprising people whom you know certainly will not come at the time they are wanted, and may turn up at the time they are not wanted. We have experience of that, and what the President said about the work of the officers applies to the work of the committees. I don't suppose anybody knows the work which has been done by three or four committees of this Association during the past year. Every now and then a man attends who has not been present for a long time, and it then becomes a question of re-converting him and wasting time in the process. If any gentleman, by being *ex-officio* or by appointment, is on a committee, there should be some way of removing him if he does not take up the honour which has been conferred upon him—that is, by attendance. I think this is a splendid omission of a number of names of those who never do attend, and who should not appear on our lists as members of committees.

Dr. URQUHART.—I think that Dr. Morrison is under a misapprehension. The Standing Committees, by Rule 101, are appointed by the Association at the Annual Meeting. The Association appoints its own standing committees, and the Association has it in its power at any time to place on these standing committees whom it likes and to reject whom it likes. I despair of the intentions of the Divisions and the intentions of this committee being generally understood when Dr. Morrison says that this could possibly work out as a close borough. The Nominations Committee are appointed directly by the members of this Association, and if that Nominations Committee is not doing the work entrusted to it to the satisfaction of the Association, it is the easiest thing possible for the Association to alter the *personnel* entirely at the next annual meeting. The whole work of the Rules Committee has been to make the Association an absolute democracy. (Hear, hear.)

Dr. ROBERT JONES.—At the expense of being considered one of those referred to by the Treasurer as turning up at most unwelcome times ("No, no," from the Treasurer), I cannot help thinking that there must be something radically wrong in omitting from the Educational Committee those who are in touch with the students. (No, no.) At the previous Council Meeting we deplored the insufficient number of candidates at the examination for the diploma in psychological medicine, and, as a matter of fact, although our examinations for nurses have gone ahead enormously, there are not half a dozen—and I do not think there is a member in this room—who have gone in for the examination for the Diploma of the Medico-Psychological Association. We want to popularise this examination. I speak of Dr. Mercier's special knowledge on this question with great deference, because he has taken great trouble to bring up the scheme for making this Diploma attractive, and it seems to me that if you want to popularise this examination, you are rather cutting the ground from under you by taking away compulsorily, as is now proposed, those who are in touch with teaching. The omission of this clause proposed in the new Rules seems to suggest that.

Dr. CARLYLE JOHNSTONE.—I should like to endeavour to remove the misconception under which Dr. Morrison is labouring, and also, I think, from which Dr. Jones suffers. What is proposed in the amended rule is, that in future the Educational Committee shall be placed in the same position as the Parliamentary Committee and the Library Committee,—that is to say, they shall be constituted of members elected for that particular purpose. At present the Educational Committee consists almost entirely of official members, and if any person takes the trouble to look over the list of attendances he will see that the majority of those official members never darken the doors of a meeting of the Educational Committee. But in future all those Committees are to consist of persons who are especially fitted for the work of those Committees. Whether they are teachers or not does not matter if they are fitted for the work of the particular committee. I do not understand Dr. Jones' misconception, because it seems evident on the face of it that every member who is particularly adapted for that particular work and committee will be nominated by the Nominations Committee, and that Nominations Committee is an essentially popular body, representing directly the individual members of the Association.

Dr. ROBERT JONES.—We have already heard that a very great amount of the work of these committees is carried on by correspondence. To cut off with a clean sweep those who have not attended seems to be a drastic measure.

The PRESIDENT.—Dr. Morrison's amendment is that the old rule shall replace the rule suggested by the Rules Committee.

The amendment, on being put to the meeting, was declared lost, and the suggested alteration of the Rules Committee was then put as a substantive motion and carried.

Rule 103 a, agreed.

Dr. MORRISON.—May I suggest that, like any other standing committee, the Library Committee should present their report to the Association? We should like to know what is being done by the Library Committee, and if any useful additions are being made to the library.

Dr. WHITCOMBE.—I would ask a question of Dr. Urquhart. He says you can have a Nominations Committee which you can sweep away if you like if you are not satisfied. I think you cannot. After you have got this approved by the Board of Trade how can you alter it, unless you alter the Treasurer and President?

Dr. URQUHART.—That is the way.

Rule 103 b.—The Nominations Committee shall consist of the President, the Treasurer, the General Secretary, the Divisional Secretaries, and one of the Editors. It shall nominate to the Council at the Meeting held at least two months before the Annual Meeting Members for the official appointments of the Association, and at least one third of the non-official Members of the Council, with the exception of the President and such nominations as are made by the Divisions. It shall also annually revise the lists of names on the Standing Committees, and adjust the same for the consideration of the Council. It shall also, in its discretion, nominate as Honorary and Corresponding Members those whose names are proposed under Bye-law 18 for the consideration of the Council.

Dr. WHITCOMBE.—I think that this proposed rule is a retrograde movement; it seems to me you are taking the representation entirely out of the hands of the annual meeting. It is all very well to say that the annual meeting has the power to vote against the nominations which are made, but my own idea is—and I think it is pretty general—that whenever an official body nominates there is generally a strong feeling that they should be supported. I cannot help remembering that twenty years ago I was sent to the Council by the vote of the assistant medical officers—a very strong body of members of this Association;—and I think, sir, that the annual meeting is the only body which should deal with this matter. It is very seldom we have many assistant medical officers here, and they should have their voice in the general management of the Association. I am strongly of opinion that this Nominations Committee is a great mistake. I move the omission of this proposed Rule 103 b.

Dr. ROBERT JONES.—I second that. I can see that this Nominations Committee is going to swamp the "Old Guard;" I believe with multiplication of Divisions you will have the whole question of the policy of the Association decided by the divisional secretaries. It is rather a serious thing to place so much responsibility in the hands of a very junior assembly—I take myself to be a little more than junior,—but although I am General Secretary I should not desire to undertake so great a responsibility as to decide the future policy of the Association, more particularly as the policy concerns the election probably of President, because I see the President-elect may be nominated by this Committee. It is a little premature. I think we should advance *festina lente* in this direction. I would much rather that the Nominations Committee consist only of ex-presidents, *vis.*, those who have already passed the chair.

Dr. JOHNSTONE.—I cannot agree with what Dr. Jones says. I do not take it at all that this Nominations Committee elects anybody. All the rule says is that they are to nominate the Council. If the Council do not take up the nominations so made they must make their own, and that final nomination by the Council comes to the annual meeting, as now.

Dr. SPENCE.—I have some sympathy with what Dr. Jones says, because I feel—although I am sure you will quite understand that as one of the past presidents of the Association I am not making a personal matter of this—it would not be a bad thing if you had some of the older members of the Association on the Nominations Committee. ("You have.") The President, yes; but the President may or may not be a senior officer of the Association, and the General Secretary may not be, nor need the past-president nor the Divisional

Secretaries. I suggest that two or three past-presidents should be added to this Committee.

The PRESIDENT.—We are on Dr. Whitcombe's amendment.

Dr. ROBERT JONES.—The present suggestion in the new rules is a subtle attempt to control the Association from outside, because the President-elect has been omitted, and comes directly under the suggestion and proposition of this Nominations Committee, consisting possibly of quite junior men, who would elect the President. ("No, no.")

The PRESIDENT.—We are getting away from the amendment, which was that there should be no Nominations Committee. I shall put Dr. Whitcombe's amendment to the meeting in the first place, and we shall see the result.

Dr. URQUHART.—It seems to be taken for granted that this Nominations Committee is to nominate the President; but you will see that the President is excluded.

Dr. ROBERT JONES.—It was the President-elect who was referred to. There is nothing excluding his nomination by this Committee, and of course once he is the President-elect the Presidency devolves upon him.

The PRESIDENT.—That is an important point.

Dr. CARLYLE JOHNSTONE.—It is moved that the whole of this proposed rule be deleted. That would be very unfortunate. The whole point of it is that the nominations of officers of this Association have been made in an obscure manner, and they have been made in an unauthorised manner, because there was no law. The nominations were obscure because no one knew how they were made. It is proposed that in future a Nominations Committee shall be appointed, with older members of the Association upon it, and that that Nominations Committee shall select whomsoever seems to be a suitable person for a particular office. I do not see how reasonable objection can be taken to that. Of course you can go back to the old way, and have your officers selected in an unsatisfactory manner.

The PRESIDENT.—Do you adhere to your original amendment, Dr. Whitcombe?

Dr. WHITCOMBE.—I do, sir.

The PRESIDENT.—The amendment is that Rule 103 *b* be deleted altogether.

This was put to the meeting and lost.

The PRESIDENT.—I think, Dr. Spence, your idea was that the Nominations Committee should be increased?

Dr. SPENCE.—I propose that the Nominations Committee shall consist of the President, two Past-Presidents, the Treasurer, the General Secretary, the Divisional Secretaries, and one of the Editors.

Dr. HAYES NEWINGTON.—The two immediately preceding Past-Presidents?

Dr. MORRISON.—You may have a member from outside the Nominations Committee.

Dr. SPENCE.—I refer to the two immediate past-presidents.

Dr. WEATHERLEY.—I second that.

The PRESIDENT.—The Nominations Committee is somewhat small, and it would be well to increase it slightly. I will put Dr. Spence's amendment to the meeting,—that is to say, 103 *b* as a substantive motion with Dr. Spence's amendment.

Agreed.

Dr. TURNBULL.—I think the rule should be "with the exception of the President-elect."

The PRESIDENT.—I think it is a necessary point.

Dr. URQUHART.—I agree to it.

Dr. JONES.—I second that, and it is my contention.

Carried.

Rule 104 a, agreed; Rule 107, agreed; Rule 108, agreed.

Rule 110.—A notice may be served on behalf of the Association upon any member either personally or by sending it in a prepaid registered letter *through the post* addressed to such Member at his *registered* address in the current volume of the Medical Register, and all such registered notices shall be deemed sufficient for the purposes of these Articles and Bye-laws.

Dr. MERCIER.—There are some small clerical errors by the printer which require alteration. He has put in the word "registered" three times, when once is sufficient. It is a pure matter of form, but this meeting ought to sanction every

alteration made in the rules. The word "registered" on the third and fifth lines should come out, that on the fourth line remaining.

Agreed.

The PRESIDENT.—Before passing to the other business we ought to acknowledge in a special manner the great indebtedness we are under to the Rules Committee, and especially to the Chairman, Dr. Urquhart, for the enormous amount of time and trouble they have spent over this matter. The result has been presented in a very complete way, and it is a very great compliment to Dr. Urquhart and to the Rules Committee that these complicated questions, involving a complete revision of the constitution of the Association, have been passed with so little trouble at this meeting. (Applause.)

Dr. URQUHART.—I am very deeply indebted to you, sir, and to you, gentlemen, for the reception you have given to our labours, and the happy issue that has attended them.

LIBRARY COMMITTEE.

Dr. FLETCHER BEACH submitted the following report and moved its adoption:—
"We beg to report that Dr. Seymour Tuke has submitted to us a list of books for the library, from which we have made a selection, and these are now being purchased and added to the library. We beg to ask that we may be reappointed."

Agreed.

STATISTICAL COMMITTEE.

The PRESIDENT.—I will call upon Dr. Bond to submit his report.

Dr. BOND read the interim report, and it was agreed to.

STATISTICAL COMMITTEE'S REPORT.

As a preliminary step the Committee issued a circular to all the members of the Association in order to ascertain their views as to what alterations in the Association's tables were desirable. The suggestions so obtained were duly considered at the first meeting of the Committee. This was held in London on November 19th and 20th last year, when Dr. Yellowlees was elected chairman and Dr. Bond secretary.

The Committee have since held four other meetings:—February 13th at Derby, April 22nd and 23rd at Bethlem Hospital, June 11th and 12th at the York Retreat, and yesterday in London.

But though they have thus so far devoted more than seven whole days to the work, the subject matter has proved so extensive, and the wisdom of the work being done thoroughly and without hurry so obvious, that the Committee are not prepared at this annual meeting to do other than present an *interim* report. They also realise that at least another year will be required before they can issue a full report.

Their endeavour so far has been to make the tables at once simpler and more useful. The experience of more than twenty years which have elapsed since the present forms were settled shows that much complicated compilation, while it has its own value, has not proved to be so generally useful as to justify the amount of labour expended on it.

In the course of their work the Committee has been greatly impressed with the desirability of obtaining *identity of form* in the statistics presented by the various asylums and by the different Boards of Commissioners.

The Committee felt that such identity would save an enormous amount of clerical work, and indefinitely increase the value and accuracy of the statistics, and would make them for the first time fully available for comparison and deduction.

The Committee have been in unofficial communication with the Lunacy Commissioners in each of the three Divisions of the kingdom, a procedure which has been endorsed by the Council. They have much pleasure in reporting that the idea was cordially received by all these Boards, and that all have expressed their

willingness to consider fully any suggestions made by the Committee, and to meet them in conference if desired.

It is of course understood that no such scheme could be adopted until submitted to and sanctioned by the Association, but the Committee hope that their present endeavour to secure such identity of forms of statistics will be approved.

DR. CHAPMAN'S REPORT UPON THE REPORT OF THE LATE TUBERCULOSIS COMMITTEE.

The PRESIDENT.—The next point is the presentation of Dr. Chapman's report on the Report of the late Tuberculosis Committee, which I have been asked to bring before the meeting. Dr. Chapman has done his work in a very masterly manner, and this report which he has presented has added very much to the value of the statistics collected by that Committee. I would call particular attention to the point which he brings out with regard to indigenous phthisis, which, I think, is a very important condition. Generally speaking, Dr. Chapman's report justifies some of the criticisms which were passed upon the original report as regards errors in the tables; but, at the same time, Dr. Chapman arrived at the very satisfactory conclusion that this report does not traverse any of the conclusions in the Report of the Tuberculosis Committee. That is the kernel of the matter, and the fact is that the conclusions are correct. And now the statistics are corrected we are placed in a better position than before; and the Council proposes that this report shall be published in the JOURNAL, and that copies shall also be sent to the medical journals for review, and that a certain number shall be printed and distributed to any institutions or individuals who may desire them. I also wish to move a very hearty vote of thanks to Dr. Chapman for his assistance in this matter. It was no light task to go through this drudgery, and I think this Association is extremely indebted to him for so freely spending his time over it.

Dr. HAYES NEWINGTON.—I beg to second that—not only the general remarks which have been made by the President on the receipt of this amended report, but especially with regard to what he said as to Dr. Chapman. Our President has had the advantage, as others have, of seeing the work which he has done; it has been limitless, and the cheerful way in which he has taken up that work is worthy of our warmest thanks.

Dr. URQUHART.—Will it be an instruction to the General Secretary to record this vote of thanks to Dr. Chapman as one of the most honoured and one of the oldest members of this Association and to communicate our appreciation to him?

The PRESIDENT.—Certainly; that is understood.

Agreed.

ELECTIONS.

PARLIAMENTARY COMMITTEE.

The PRESIDENT.—You will see many blanks in the attendances, but there has been very little business before the Committee in the last year. I shall now receive nominations.

Dr. ROBERT JONES.—I should like to propose an additional name, that of Dr. Hyslop.

A MEMBER.—I second that. Is there any number limit?

The PRESIDENT.—No.

Dr. MERCIER.—I propose that the name of Dr. Claye Shaw be added. He is not as constant in his attendance at these meetings as I should desire, but he is in a position of greater ease and less responsibility, he proposes to take a more active share in the proceedings of the Association, and he has expressed a wish to take part in the labours of the Parliamentary Committee. We know that one volunteer is worth ten pressed men. I hope that Dr. Claye Shaw will be accepted.

The PRESIDENT.—I am sure we shall be extremely glad to welcome Dr. Claye Shaw.

Dr. CARLYLE JOHNSTONE.—I move that the name of Dr. Weatherly be added.

Agreed.

Dr. URQUHART.—This is a delicate question, but it should be faced. I see, for instance, Mr. Rooke Ley's name. Is it possible Mr. Rooke Ley will take any interest in the business of the Parliamentary Committee?

The PRESIDENT.—Has he attended any of the meetings during the last three years?

Dr. URQUHART.—I cannot speak in regard to the last three years.

The PRESIDENT.—If he has not attended during the last three years, his name should be deleted.

Dr. URQUHART.—I move that those who cannot show an attendance at the Parliamentary Committee meetings during two successive years be deleted.

Dr. HAYES NEWINGTON.—That would be a little hard, I think. If you were to make it five years it would be right enough. (No, no.) For the last two years there has been no Bill to deal with, so as to bring the members of the Committee together.

Dr. URQUHART.—Well, I shall say for the last three years.

Dr. BOWER.—I suggest that it might very well be left to the Council to see who the men are who do not attend.

The PRESIDENT.—We have to deal with it now.

Dr. BOWER.—Could we not follow our previous practice of re-electing now, and leave the delicate duty of cutting out names to the other members of the Committee?

The PRESIDENT.—We should not shirk our duty. The proposition is that those who have not attended for three years be deleted.

Carried.

The PRESIDENT.—We cannot tell just now who comes under that ruling.

Dr. CARLYLE JOHNSTONE.—To avoid misconception, as Dr. Benham's name is unofficial, I beg to propose that Dr. Benham's name be added to the Parliamentary Committee.

Dr. ROBERT JONES.—That is understood, and I have much pleasure in seconding it.

EDUCATIONAL COMMITTEE.

The PRESIDENT.—This is a very large Committee, and there are not so many absences.

Dr. MERCIER.—I suggest the omission of the name of Dr. E. C. Rogers, who has been on the Committee for ten or twelve years and has never attended a meeting. The same may be said of Dr. Kennedy Will. And, while I had the pleasure to propose Dr. Clay Shaw for the Parliamentary Committee, I have the pain to request that he be removed from the Educational Committee for non-attendance—he has never attended a meeting of that Committee.

Dr. CARLYLE JOHNSTONE.—If these gentlemen are teachers they cannot be removed. I beg to move that those members who have attended at least one meeting during the past year be re-elected; and it is open to any member to propose additional names. Those who are teachers are official members, but there are various added members.

Dr. ROBERT JONES.—I have pleasure in seconding this hardy annual of Dr. Carlyle Johnson's.

Dr. MERCIER.—There is another motion under the head of Complimentary Motions.

The PRESIDENT.—I want to know if Dr. Mercier is speaking to this motion.

COMPLIMENTARY MOTION.

Dr. MERCIER.—I rise, sir, to propose a resolution which is not on the agenda, but when the purport of it is known the irregularity will be not merely condoned, but applauded. Since we last met it has pleased His Majesty to confer a signal mark of his favour and approval upon a gentleman who is regarded by everyone in this country who has had charge of the insane for any time within the last five and twenty years, as a true and dear friend; and I shall move that the warmest congratulations of this Association be tendered to Sir Charles Bagot on his retire-

ment from his long service on the Lunacy Commission. (Loud applause.) Among people who know him so well there is no need for me to enlarge upon this theme, for who is there here who has not been impressed by Sir Charles Bagot's kindness, his old-world courtesy, his unflinching patience, by the benevolence which took all the sting out of reproof when reproof had to be inflicted, and by his rigid sense of justice? How, among the innumerable multitude of patients that he had to visit officially, he could remember the names and peculiarities of so many, and discuss with knowledge their private affairs, has always been to me a wonder; and it is no exaggeration to say that to many of them the Lunacy Commission was summed up in his person. They looked forward to his visits, feeling that in him they had a friend and protector; and the volume of their correspondence with him individually must have been no small embarrassment. I beg to move that the warmest congratulations of this Association be tendered to Sir Charles Bagot on the honour which has been conferred upon him by His Majesty, and that this Association trusts that he may long enjoy his well-earned leisure.

The PRESIDENT.—I am sure we shall all agree with that.

The motion was carried by acclamation.

The meeting then adjourned.

The meeting having reassembled at two o'clock,—

The PRESIDENT.—Gentlemen, there is only one duty for me to perform, and that is the pleasing one of vacating this chair and handing it over to my successor, Dr. White. Dr. White requires no word of introduction on my part. He is well known to you all who are of our specialty, and I am confident he will fill the chair with great credit to himself and with honour to the Society.

Dr. Ernest W. White then took the chair.

VOTE OF THANKS TO THE PRESIDENT.

Dr. SAVAGE.—Mr. President, this is the first time I have had the honour of addressing you as President, and my first duty is a very pleasing one, and that is to express my own personal thanks, and the thanks of the Association, to the late President, Dr. Wigglesworth, for the most efficient way in which he has carried out the affairs of the Association. Nothing could have been better than the way in which he has presided over the general meetings, and dealt with the very large amount of work that does not appear on the surface. In saying good-bye to Dr. Wigglesworth I am sure we all feel that he has done his work thoroughly well, and we wish he may have a good and recreative holiday. And even though he does not visit the wilds of St. Kilda and study birds, and risk his neck in the process, one is sure that his healthy general tastes will enable him to enjoy the retirement from his official work. I will not detain you further except to express most heartily the thanks of the members for the kind and efficient way in which Dr. Wigglesworth has performed the duties of President.

Dr. SPENCE.—Mr. President, I have been asked to second this vote of thanks to the outgoing President. I would look upon Dr. Wigglesworth's career from another point of view than that from which Dr. Savage regarded it, that is not altogether in his professional capacity or as President of this Association, but as a man, and as the individual whom we all delight to honour in his private capacity. When he commenced his career as President of this Association by the magnificent reception he gave us at Liverpool, we felt sure we had the right man as President, and during the time he has filled the chair he has shown so much kindness in his dealings with fellow-members that he leaves with the most affectionate regard of every member of the Association with whom he has come in contact. It gives me very great pleasure in seconding this vote of thanks.

Carried by acclamation.

Dr. WIGGLESWORTH.—I thank you very heartily, Dr. Savage and Dr. Spence, for the manner in which you have referred to my poor services. It has been exceedingly gratifying to me that you should have expressed yourselves as you have done. When I was first asked to take the Presidency I felt considerable diffidence, but I have had such hearty and loyal support on all hands in the Society that my work has been helped tremendously, especially by Dr. Jones and the Hon. Treasurer. The careful way in which gentlemen have lent themselves to the work

has made the task exceedingly light. I shall always look back to my period of office with great pleasure. A great honour was bestowed upon me by putting me in the chair.

The PRESIDENT.—We have several distinguished visitors from the United States, whom I am sure you will welcome here to-day. (Applause.)

The PRESIDENT (Dr. Ernest White) then delivered his presidential address (see page 587).

Dr. A. R. TURNBULL opened a discussion on "Female Nursing of the Male Insane" (see page 629).

SECOND DAY.

Dr. MOTT gave a lantern demonstration on "Tumours of the Brain in Asylum and Hospital Practice." The publication of this contribution has been unavoidably postponed.

Dr. BRUCE read a paper contributed by himself and Dr. Peebles, entitled "Clinical and Experimental Observations on Hebeephrenia and Katatonia" (see page 614).

Dr. CHARLES H. FENNELL read a paper on "Mongolian Imbecility."

Dr. ALBERT WILSON contributed an account of "A Case of Double Consciousness" (see page 640).

COUNCIL AND COMMITTEES.

In connection with the Annual Meeting there were meetings of Educational, Parliamentary, Rules, and Statistical Committees. The Council met on July 16th, The following members were present:—

C. H. Bond, G. Braine-Hartnell, L. C. Bruce, C. K. Hitchcock, M. Craig, W. R. Dawson, H. Gardiner Hill, Robert Jones, P. W. MacDonald, C. A. Mercier, A. Miller, H. Hayes Newington, H. Rayner, R. L. Rutherford, J. B. Spence, R. C. Stewart, A. R. Turnbull, A. R. Urquhart, E. B. Whitcombe, E. W. White, J. Wiglesworth (chairman).

The usual official reports were received and dealt with.

IRISH DIVISION.

The Summer Meeting of this Division was, by the kindness of Dr. T. Drapes, held at the Wexford District Asylum, Enniscorthy, on Friday, July 3rd.

The morning was occupied by a visit to some places of interest in the neighbourhood, notably the historic Vinegar Hill, after which the members present inspected the asylum, and a number of interesting cases were demonstrated.

The members were entertained to luncheon by Dr. Drapes, after which the meeting took place.

Dr. Drapes occupied the chair, and there were also present Drs. Conolly Norman, M. J. Nolan, R. R. Leeper, J. J. Fitzgerald, H. M. Eustace, F. J. Kennedy, and W. R. Dawson (Hon. Sec.). Apologies for non-attendance were received from Drs. Oscar Woods and R. L. Donaldson.

The minutes of the previous meeting were taken as read and signed, the essentials having already been published in the JOURNAL.

LETTER.

A letter was read from Dr. Seward, of Colney Hatch Asylum, thanking the members of the Irish Division for the vote of sympathy passed by them at their last meeting. It was directed that it should be entered on the minutes.

DATE AND PLACE OF NEXT MEETING.

It was decided to hold the next meeting of the Division in November. An invitation from Dr. R. R. Leeper to meet at St. Patrick's Hospital, Dublin, on that occasion, was unanimously accepted with thanks.

ELECTION OF ORDINARY MEMBER.

The following was unanimously elected: P. O'Doherty, B.A., M.B., B.Ch., B.A.O.(R.U.I.), Assistant Medical Officer, District Asylum, Omagh (proposed by Drs. Conolly Norman, J. M. Redington, and W. R. Dawson).

MOTION.

The following motion was brought forward by Dr. M. J. NOLAN :—"That inasmuch as the Lord Lieutenant has appointed a Commission *inter alia* 'to inquire and report whether any, and what, administrative and financial changes are desirable in order to secure a more economical system for the relief of the sick, the insane, and all classes of destitute poor in Ireland, without impairing efficiency of administration,' it is expedient for the Irish Branch of the Medico-Psychological Association to confer on the points affecting the insane, and, if it be deemed necessary, to formulate the expressions of their special experience on such important matters."

Dr. CONOLLY NORMAN seconded the motion, and in the course of the discussion, which was also joined in by Dr. R. R. LEEPER and the CHAIRMAN, a letter was read from Dr. Oscar Woods. Finally the motion was put to the meeting and passed unanimously.

A small committee, consisting of Drs. Nolan, Leeper, Norman, and the Hon. Secretary, was appointed to give effect to the resolution.

COMMUNICATIONS.

1. Dr. CONOLLY NORMAN brought forward a communication entitled "The Unpardonable Sin as Obsession," in which he touched upon the nature of obsessions in general, drawing attention to their connection with morbid impulse, hallucination, and melancholia; and then gave a number of cases bearing upon the particular form of obsession under discussion.

Dr. DRAPES said he found it difficult to obtain an exact definition of the term "obsession," which was not mentioned at all in most of the text-books; but he took it to mean the same as "imperative conception." Such he considered to be, not a separate form of mental disease, but merely stages in the development of delusions, and he did not know that there was anything special in that concerning the unpardonable sin. As for confounding obsession with melancholia, he did not think that possible, as it was in his opinion merely a symptom of melancholia. Again, Dr. Norman had spoken of psychical anæsthesia as accompanying obsession, but he thought the case cited, in which the patient was greatly distressed by the idea that she had been unkind to her sister, did not bear out this contention. The case which resulted from a disappointment in love was an instance of the well-known association of erotic and religious ideas in the insane; and although the reason for this association was not obvious, he thought that if we could know all that was in the patient's mind a connection would be found. As regarded the unpardonable sin, sane persons often had the idea that they had committed it, but it was especially in melancholia that this idea arose.

Dr. NOLAN did not agree with Dr. Drapes that obsession was merely a phase of any form of mental disease, and thought the cases detailed by Dr. Norman were remarkably striking examples of the evolution of obsession, illustrating particular phases of it. The idea of having committed the unpardonable sin was limited to the members of certain religious bodies, and Roman Catholics and Methodists, owing to their particular religious beliefs, were free from it no matter how depressed they might be.

Dr. NORMAN, in replying, defended the use of the term "obsession" on the ground of convenience. He said that the distinction between obsession and melancholia could not always be made in practice, but theoretically the difference was that whereas the melancholic patient is persistently depressed and under the influence of melancholic insane ideas, the patient suffering from pure obsession is not persistently depressed; his general and emotional state may be unaffected, and his mind lucid. He resists the continual intrusion of the idea or word into his thoughts, and is acutely conscious of his mental state, but not necessarily melan-

cholic. Obsession was an elementary disturbance in the sense of personality, but a very common condition apart from ordinary insanity. Such cases were seen oftener in private practice than in asylums, and although they seemed to be trembling on the verge of melancholia they did not pass it. Obsession, however, sometimes ended in fixed delusion.

2. Dr. R. R. LEEPER read a paper entitled "Notes on the Treatment of Acute Cases" (see page 689).

3. Dr. DAWSON read "Notes on two cases illustrating the difference between Katatonia and Melancholia Attonita" (see page 686).

VOTE OF THANKS.

A vote of thanks was passed to Dr. Drapes for his kind hospitality, and he having responded, the proceedings terminated.

BRITISH MEDICAL ASSOCIATION.

ANNUAL MEETING, SWANSEA, 1903.

SECTION OF PSYCHOLOGICAL MEDICINE.

President: Robert Jones, M.D. Vice-Presidents: J. Glendinning, M.D., Edwin Goodall, M.D. Hon. Secretaries: R. S. Stewart, M.D.; R. H. Cole, M.D.,
The section was well attended, and the papers read were fully discussed.

PRESIDENT'S ADDRESS.

Dr. ROBERT JONES delivered an address on "The Development of Insanity in regard to Civilisation," and demonstrated that with the progress in civilisation mental breakdown became more serious and more frequent, and the varieties of insanity were more chronic and less curable now than when life was simpler and men more content. The care and cure of the insane was hardly known as a subject of serious study 100 years ago. The last century had been the most marked of any of its predecessors in regard to the material, mental, and moral progress of mankind; yet this advance had not been without sacrifices, for in the struggle that civilisation entailed the path of progress had been freely strewn with mental wreckage and physical degeneration.

As to what constituted insanity, delusions or hallucinations alone did not suffice, neither was it exclusively an intellectual disorder. Exaggerations and fluctuations of normal tendencies rendered individuals unstable, untrustworthy, and even dangerous, yet there might be hardly any loss of mind; nevertheless they were fit and proper persons to be detained in asylums; many of these cases were born constitutionally insane.

In primitive states of society insanity was rare, though idiocy and imbecility might be as prevalent, and the tendency to dementia was quite uncommon. The progress of mankind had caused a more or less complete change in the types of insanity during the past half-century. An inherited instability of nervous organisation was more frequent to-day, being responsible for more than one third of all occurring insanity. Amongst the causes of insanity both physical and mental stress had to be reckoned with. Charles Booth, in a recent publication *Life and Labour of the People*, had stated that the anxieties and uncertainties of professional life in the middle and lower classes were responsible for a very large proportion of insanity, which was to some extent due to loss of trade affecting bodily health; that provided wages were regular, although low, and there was no nervous strain, the tendency to insanity was slight. In their efforts to rise to the higher level of work and capacity demanded by modern civilisation, many failed owing to mental, physical, or moral deterioration. Civilised society, in forcing the pace, manufactured its own unfit—its lunatics, paupers, and criminals. London alone, in this respect, was responsible for the production of over seventy insane persons

per week, and this number was apparently destined unrelentingly to increase. The only neutralising agency was the fact that sterilisation followed in the wake of three or four generations of town-bred people—a natural law which ensured that the unfit should cease to encumber the earth. In cities, where the population had to accommodate itself to the pressure of competition, the tension of mind was more continuous; artificial desires multiplied, unhealthy activities were created, and ambition further forced the overwrought brain. Kraepelin had shown that muscular exhaustion weakened brain power in definite curves and ratios. It was not, however, overwork so much as worry and anxiety which caused actual insanity. Civilisation brought to the idle rich sensuous luxuries of all kinds; and to the poor lack of proper food, overcrowding, unsuitable surroundings both moral and hygienic, alcoholic indulgence, poverty, and crime, all of which bore a very intimate relation to insanity. Overcrowding led to physical discomforts and gave rise to facilities for moral contamination. Crowds of the dwellers in slums, stifled by the unattractive nature of their environment, sought to drown their misery in alcohol. One fifth of all the cases of insanity occurring in men, and more than half this proportion in women, were due to alcoholic intemperance. The crowding into towns of the country dweller had contributed to the deterioration of the physique of the nation in spite of the progress of sanitation, and deaths from cancer and nervous diseases had markedly increased. Athleticism must be regarded as a corrective of neurotic heredity, but if carried to excess must be attended with the danger of areterial overstrain, which was harmful to future generations. The present system of education had doubtless raised the general intelligence of the community, but it had a tendency to destroy individuality, and promoted useless cramming. Altruism had lessened and selfishness increased, charity being doled out with less liberality than heretofore. Legal statistics showed that certain offences were increasing; that marital inconstancy was more frequent, and that there was a laxity of morals amongst women, especially of the "smart set;" that commercial morality had declined, as evidenced by the number of crimes of embezzlement and betrayal of trust; and that gambling, especially in women, was becoming more general.

Syphilis was probably more common now than it was a century ago, and the increase of general paralysis of the insane—a result of syphilitic disease of the nervous system—pointed to the increasing ravages of the virus. Fanatics and faddists had raised such "conscientious objections" that there was but little hope of limiting the spread of syphilis by legislative regulation of contagious disease. Dementia præcox—a disease rare at the beginning of last century—was now as common as it was incurable, attacking some of the most promising of our youth who had succumbed to the existing mental overstrain. There was also an increased tendency to melancholia, especially among the educated and private class, with a less favourable prognosis than occurred in mania. The recovery rate therefore, from a combination of causes, had fallen *pari passu* with the alteration in the types of occurring insanity, which had been one feature in the production of the increase in insanity. Spiritual influence and the education of public opinion should be promoted to prevent the extension of lowered mental and physical vigour in our civilised communities.

THE PATHOLOGY OF GENERAL PARALYSIS.

Dr. W. FORD ROBERTSON, pathologist to the Scottish Asylums, opened a discussion on this subject, illustrated by lantern demonstrations. He stated that the pathogenesis of general paralysis was still unknown with anything like accuracy, and that therefore we had no right to conclude that it would always remain incurable. The syphilitic origin of the disease, though held by the majority of neurologists at the present day, was not yet sufficiently proven. Against the essentially specific theory was the fact that many observers had seen or reported cases of general paralysis in which syphilis had not previously occurred, congenitally or otherwise, and that many cases were now known in which the virus was contracted after the onset of the symptoms of general paralysis. Although statistics might show a high percentage of antecedent syphilis in cases of general paralysis, the fact was incontrovertible that only a very small proportion of syphilitised persons ever developed general paralysis or tabes dorsalis, and that therefore the doctrine—no

syphilis, no general paralysis—could not be entertained. Similar statistical evidence could be adduced showing that very high percentages of persons affected by tuberculosis had previously had measles, yet they did not believe any direct causal relationship existed. Moreover the syphilitic hypothesis did not explain the established fact that there were other conditions, such as chronic alcoholism, lead-poisoning, and excessive meat diet, which favoured the development of general paralysis. *Post-mortem* examination of the non-nervous organs or tissues of the body in cases of general paralysis showed that an active bacterial toxæmia was present. Dr. Lewis Bruce and Dr. Robertson had directed attention to the gastro-intestinal disorders that occurred in cases of general paralysis, and had published their belief (*Brit. Med. Journ.*, June 29th, 1901) that general paralysis was dependent upon a toxæmia of gastro-intestinal and bacterial origin; but Dr. Bruce had since modified his view so as to regard toxic infection by the *Bacillus coli* as a secondary or terminal infection. More recently Dr. G. D. MacRae, Dr. John Jeffrey, and Dr. Robertson had advanced the hypothesis that general paralysis was the result of a toxæmia dependent upon the excessive growth of bacteria, not only in the alimentary canal, but in the nasal tract and throat; and especially that of a diphtheroid bacillus, which gave the disease its distinctive characters. The recognised causes of general paralysis—syphilis, etc.—appeared to act as stimulants of the leucoblastic tissue of the bone-marrow, or directly damaged this tissue, so that the defences of the body against the invasion of bacteria were diminished or damaged. The protective functions of the body were thus impaired, and in such circumstances the bacteria normally present as saprophytes assumed a pathogenic character by reason of the protective forces of the body being weakened. The view was advanced that the special infective agent was an attenuated form of the Klebs-Löffler bacillus. The symptoms during life and the appearances *post mortem* were all in favour of the hypothesis of bacterial infection. Cultures were made in *post-mortem* examinations of twenty cases of general paralysis, the nasal or intestinal contents being used for this purpose. In seventeen of these cases, in addition to other bacteria, the diphtheroid bacillus was found in the cultures, whilst in the remaining three the bacillus was found by other means of detection. In eight out of the twenty cases this diphtheroid bacillus was found in very great numbers. A recent series of cultures from the secretions of the nose and throat of ten general paralytics in the Edinburgh Royal Asylum showed that the diphtheroid bacillus was present in nine cases. Out of sixteen cases of general paralysis where cultures were made from the brain *post mortem*, four showed the presence of the diphtheroid bacillus. The bacillus in these four cases must have obtained an entry either by the blood or by local infection through the nose. Experiments had been made with the diphtheroid bacillus introduced into the alimentary canal of rats with positive results—showing changes in the nerve-cells of the brain. The whole body of facts therefore supported the view of the specific bacillary origin of general paralysis of the insane.

CAVITIES IN THE SPINAL CORD.

Dr. R. S. Rows, pathologist to the Lancashire County Asylum, Whittingham read a short paper and exhibited lantern slides illustrating three different cases in which cavities in the spinal cord were found. In the first of these the cavity formation was due to atrophy of the nervous tissue and neuralgia, in the second to syringomyelia, and in the third to hæmorrhage into the perivascular spaces and substance of the spinal cord.

ALCOHOL IN ITS RELATION TO MENTAL DISEASES.

Dr. THEO. B. HYSLOP opened the discussion on this subject, and read a paper on the relationship of alcohol to physical and mental processes. He maintained that the rôle of alcohol in the healthy body was more harmful than good, and that its use was abuse. In debilitated and neurotic persons its use was comparable to a loan raised at a heavy rate of interest, which might be employed to cope with immediate and pressing needs, but which constituted a heavy burden on the borrower until repayment was completed. Alcohol produced an illusory sense of well-being and of mental energy and capacity without in any way enhancing mental power. On the contrary, it tended to lower the ability of performing the

more complex actions, both physical and mental. Alcohol caused acceleration and confusion of ideas, and stimulated the subject to restlessness and over-action. The vascular system reacted to the presence of alcohol by vaso-dilatation and by increased exudation of lymph into the perivascular tissues, and in chronic alcoholism characteristic morbid changes were produced in the brain. The increased exudation of lymph from the blood-vessels carried with it an increase in the number of extravasated leucocytes which thereafter underwent dissolution. Alcohol also acted deleteriously by absorbing oxygen from the blood-corpuscles or plasma, depriving the nerve-cells of normal oxidation processes. The effect of alcohol on the renal organs and the action of defective elimination on the cerebral tissues were also referred to. The neuron theory was discussed and the co-ordinate relationship shown between the microscopic changes found in the brain of chronic alcoholic insanity and certain psychological phenomena, more especially amnesia and slowness in reaction-time. He did not consider that alcohol *per se* caused general paralysis of the insane.

HUMAN EVOLUTION WITH ESPECIAL REFERENCE TO ALCOHOL.

Dr. G. ARCHDALE REID, of Southsea, read a paper embodying propositions from which he concluded that alcoholism in the parent did not prejudicially affect offspring. He submitted that human individuals differed in their power of resisting diseases, and that the progeny tended to inherit this parental power or weakness. As races in bygone years had been addicted to excessive use of alcohol and had become temperate by the elimination of the unfit, so in individuals drunkenness in the ancestry might be regarded as the cause of temperance in the descendants. He considered that more definite proof was needed to support the view generally held that alcoholism in the parents produced degenerate offspring.

THE ACTION OF THE BLOOD SERUM FROM CASES OF MENTAL DISEASE UPON THE *Bacillus coli communis*.

Miss ALICE JOHNSON, of Carmarthen Asylum, read this paper (contributed jointly with Dr. E. Goodall), illustrated by charts. The examination of twenty-five cases of insanity showed that in 60 *per cent.* of the cases the blood serum caused agglutination of cultures of the *Bacillus coli*. A leucocytosis count was made in cases of insanity, and it was found that leucocytosis was high in acute mania, or when patients were passing through acute exacerbations, whereas in states of remission and of recovery the leucocytosis tended to fall. The observations showed that the *Bacillus coli communis* was an important source of toxæmia in certain forms of insanity, and that the study of leucocytosis was valuable as an index of exacerbation, remission, or recovery.

THE NATURE OF FRAGILITAS OSSIUM IN THE INSANE.

Dr. W. MAULE SMITH, pathologist to the West Riding Asylum, Wakefield, contributed this paper, in which he stated that undue fragility of the bones in the insane was commonly met with after middle life, the ribs being mostly affected. An analysis of 200 cases from the *post-mortem* records of the Wakefield Asylum was made, the investigation consisting of an estimate of the breaking strain of a rib as tested by hand; and a microscopical examination was made as to the condition of the Haversian spaces. It appeared that dementia, chronic melancholia, chronic mania, and general paralysis showed an undue fragility of bones in 77·7 *per cent.*, 76·4 *per cent.*, 66·6 *per cent.*, and 65·7 *per cent.* respectively. In epilepsy 22 *per cent.* of cases exhibited fragility of bones, whilst in idiocy and imbecility there was practically no fragility at all. He concluded from these observations that fragility of bones in the insane was rare below the age of forty-five, except in cases of general paralysis, and that, associated with this fragility, degenerative changes were to be met with in the posterior root-ganglia of the spinal cord.

SOME SLIGHTER FORMS OF MENTAL DEFECT IN CHILDREN, AND THEIR TREATMENT.

Dr. G. E. SHUTTLEWORTH, in reading this paper, referred especially to his experience of three years as examiner of children for admission to the Special

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Instruction Schools of the London School Board. Many of the lighter shades of mental defect were observed, corresponding to the more pronounced types. These included: submicrocephalic cases with head measuring circumferentially not more than 18 or 19 inches (7 per cent.), large heads suggesting hydrocephaly (3 or 4 per cent.), mongoloid cases of weakmindedness (2 to 3 per cent.), scrofulous cases (over 10 per cent.), cases with cerebral or spinal paralysis (about 2 per cent.), cretinoid cases (2 to 3 per cent.), syphilitic cases bearing characteristic stigmata (about 1 per cent.), and a few cases of post-febrile or traumatic origin. There was a large group of cases which could only be characterised as "neurotic." Of the epileptic cases 17 per cent. were estimated as fit to continue in ordinary elementary schools. Rickety skulls were met with in pauper children, and sometimes in well-to-do families who brought up their children on artificial foods.

THE CLASSIFICATION OF INSANITY.

Dr. MERCIER read a paper on this subject, and drew attention to the distinction between psychological forms and true varieties or types of insanity. The former comprised various symptoms—depression, exaltation, etc.,—whereas the latter were comparable to diseases—general paralysis, alcoholic insanity, etc.,—which ran a more or less definite course, in which the former symptoms occurred from time to time. He advocated the classification by types as published in his recent *Text-book on Insanity*.

THE CARE AND TREATMENT OF INCIPIENT INSANITY.

Dr. YELLOWLEES opened the discussion on this subject with a paper in which he regarded the term incipient insanity as the mental condition during the period between the first manifestations of mental disorder and the development into certifiable insanity. He also included cases of insanity where the insanity, although obvious, was of recent origin, and had not become permanently established. The general indications for treatment were removal as far as possible of the cause of the disorder, removal of the patient from existent surroundings, experienced nursing, wise medical treatment, pleasant companionship, good food, sufficient occupation, and suitable amusements, with discrimination and judicious application of the same. Dr. Yellowlees also dealt with the accommodation and size of asylums for recent and acute cases, and with the question of mental wards in general hospitals. He considered that any institutions, whether called "reception houses" or by other names, which received incipient cases of mental disorder for care and early treatment, should be under the jurisdiction of the Commissioners in Lunacy, and the resident physician by whom the cases were to be examined should have had wide experience of insanity in all its phases.

THE USE AND ABUSE OF PSYCHO-THERAPEUTICS.

Dr. A. T. SCHOFIELD, of London, read a paper urging the necessity of greater attention to the subject of psycho-therapeutics, which in the hands of unscrupulous persons brought discredit on the profession, to the detriment of the public in general.

THE RELATIONSHIP OF WAGE, LUNACY, AND CRIME IN SOUTH WALES.

Dr. R. S. STEWART, of Bridgend Asylum, read this paper, which was of marked local interest.

Owing to lack of time the following, among other papers contributed to the section, were taken as read, *vis.*:—"The Premature Dementia of Puberty and Adolescence," by Dr. Andriezen; "The Relation of Hysteria to Insanity," by Dr. Edridge-Green. The meeting concluded with the passing of a resolution that the name of the section should be the Section of Psychological Medicine, the name adopted for it at a meeting of the Council a year previously, and that the attention of the Council should be drawn to this matter.

OBITUARY.

FREDERIC NORTON MANNING, M.D.St. AND., M.R.C.S., L.S.A.,
Sydney, New South Wales.

We deeply regret to record the death of Dr. F. N. Manning, of Sydney, New South Wales, which took place on June 18th, after a lingering illness, in his 65th year. The following notice from the pen of one who knew him well, and which we fully endorse in all that eulogises his character and work, appeared in the *British Medical Journal* of August 1st, 1903:

Frederic Norton Manning was born at Rothersthorpe, in Northamptonshire, in the year 1839. He studied medicine at St. George's Hospital, and in 1860 obtained the diploma of the Royal College of Surgeons of England and the Licence of the Apothecaries' Hall in London. Two years later he obtained the degree of M.D. from the University of St. Andrews. Having got an appointment as surgeon in the Royal Navy, he served on H.M.S. "Esk," and saw considerable service in New Zealand during the Maori war.

In 1867 there were only two asylums for the insane in New South Wales, and the management of them and of the patients within their walls is said to have been atrocious. Sir Henry Parkes, who was at that time Premier of the Colony, recognised the urgent need of a complete reform. Happening to meet Manning, whose ship, the "Esk," was then in Sydney Harbour, he was so impressed with his character and abilities that he offered him the task of reorganising the asylums. This offer Manning accepted, and he was appointed Medical Superintendent at the Gladesville Asylum, or, as it was then called, "Tarban Creek." In the following year he was commissioned to visit Europe and America to report on the management and construction of lunatic asylums in those countries. On his return to Sydney he wrote a valuable report, which gained for him a high reputation, and was for a long time regarded as a standard work. He was subsequently appointed Inspector of Hospitals for the Insane, and on the passing of the Lunacy Act he became Inspector-General of the Insane. This position he retained for twenty years, retiring in 1898. During his tenure of office he thrice visited England, and on each occasion he took the opportunity of inquiring into the latest methods of treatment of the insane. He was thus able to render an immense service to New South Wales, the newer asylums at Callan Park and Kenmore having been practically designed by him. One of the last occasions on which he appeared before a gathering of the medical profession was a meeting of the New South Wales Branch of the British Medical Association two or three years ago, when he read a paper on a subject which was near to his heart, "The Establishment of Farm Colonies for Epileptics." Unfortunately he did not live long enough to see this realised.

Dr. Manning held several appointments at various times. He was the Visitor to Court patients under the Lunacy Act, a position which corresponds to that of the Lord Chancellor's Visitor in England. He had also held the positions of President of the Board of Health and Medical Adviser to the Government. He was formerly Lecturer on Psychological Medicine at the University of Sydney, a Trustee of the National Art Gallery, a local Director of the Equitable Life Assurance Society of the United States, a Director of the Carrington Convalescent Hospital at Camden, and lately President of the Australasian Trained Nurses' Association.

On his retirement from the position of Inspector-General of the Insane he became a consultant in mental diseases, continuing to render valuable assistance to the Government in many matters bearing on the management of the hospitals for the insane. His health began to fail some two or three years ago, and the last year of his life was spent in much pain and suffering.

Dr. Manning was a bachelor. Of his personal and professional qualities it is hardly possible to speak too highly. He was a perfect type of an English gentleman, and he was indeed beloved by all who knew his sterling worth and kindly disposition. Few men have done more than he to adorn and exalt their profession, and his death is felt as not only a national loss but as a real personal one by many of his professional friends and others who never sought his help or advice in vain. Testimonies to his worth were uttered in the Supreme Court by the Chief Judge in

Lunacy, and these were re-echoed by the leaders of the Equity Bar. But no stronger manifestation of the esteem in which he was held could be given than the imposing funeral procession which followed his remains to their last resting-place in the cemetery which is attached to the institution where he had spent his best days, and which he had himself selected some time ago for his grave. As the coffin was borne to his grave by four senior attendants of the different hospitals for the insane, a large number of the attendants followed, and he was laid to rest in the presence of a very large gathering of the medical profession, the judges of the Supreme Court, members of Parliament, and representatives of many of the institutions with which he had been connected.

The memory of Norton Manning will ever remain green in the minds of those whose privilege it was to know him as a friend and adviser, and the profession in New South Wales mourns to-day the loss of one of its brightest ornaments.

A memorial is being raised by his Australian friends.

NOTICE BY THE REGISTRAR.

The next examination for the Certificate of Proficiency in Nursing will be held on Monday, November 2nd, 1903.

NOTICES OF MEETINGS.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

General Meeting.—The next General Meeting will be held in the rooms of the Association, 11, Chandos Street, London, W., on Wednesday, November 18th, 1903.

Northern and Midland Division.—The Autumn Meeting will be held, by the courtesy of Dr. Macdowall, at the Northumberland County Asylum, Morpeth, on Friday, October 9th, 1903.

South-Eastern Division.—The Autumn Meeting will be held, by the courtesy of Dr. Rawes, at St. Luke's Hospital, on Thursday, October 29th, 1903.

South-Western Division.—The Autumn Meeting will be held, by the courtesy of Dr. Craddock, at the County Asylum, Gloucester, on Tuesday, November 3rd, 1903.

APPOINTMENTS.

Campbell, Alfred, F.R.C.S.Edin., M.R.C.S.Eng., Assistant Medical Superintendent of the Hospital for the Insane at Toowoomba, Queensland, *vice* A. Price, M.B., Ch.B.Edin., resigned.

Leslie, W. L. A., M.B.Aberd., has been appointed Assistant Medical Officer to the Grahamstown Asylum, South Africa, *vice* A. B. S. Powell, resigned.

Mendes, Thomas A., L.R.C.P.&S.Edin., L.F.P.&S.Glas., Second Assistant Medical Officer to the County and City Asylum, Hereford.

Rowell, Thos., M.B., B.S.Durh., Second Assistant Medical Officer at the City Asylum, Newcastle-on-Tyne.

Shepherd, J. H., M.B., Ch.B., Second Assistant to Dundee Royal Lunatic Asylum.

Thomson, Eric M., M.A., M.B., Ch.B.Aberd., to be Assistant Medical Officer, Government Lunatic Asylum, Kingston, Jamaica.

Mr. G. W. Mould having at his own desire retired from the office of Medical Superintendent of the Royal Asylum, Cheadle, Cheshire, has been appointed Consulting Medical Officer and Superintendent of the Welsh houses connected therewith.

Mr. Walter Scowcroft, M.R.C.S., L.R.C.P., who has been Mr. Mould's assistant for twenty-three years and Resident Deputy, has been appointed Resident Superintendent; Mr. John Sutcliffe, M.R.C.S., L.R.C.P. (second Assistant Medical Officer), has been appointed Senior Assistant Medical Officer; and Mr. Philip G. Mould, M.R.C.S., L.R.C.P., has been appointed Second Assistant Medical Officer.

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